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Addresses.

MORIAL TO THE LATE J. T. ESKRIDGE,
M.D., OF DENVER, COLO.

CHAIRMAN OF THE SECTION ON NEUROLOGY OF THE
AMERICAN MEDICAL ASSOCIATION.*

CHARLES K. MILLS, M.D.
PHILADELPHIA.

AND

FRANK P. NORBURY, M.D.
JACKSONVILLE, ILL.

ADDRESS BY DR. MILLS.

Through the death of Dr. J. T. Eskridge Jan. 17, 1902, this Section has been deprived of a chairman than whom none could have filled the position more worthily. In spite of ill health, Dr. Eskridge started the work of preparing for this meeting just before his last illness. He was in his fifty-fifth year at the time of his death. He graduated in 1875 at the Jefferson Medical College, Philadelphia, and, after nine years filled with hard work and high ambition spent in that city, he went, because of ill health in 1884, to Colorado. He was one of the founders of the Philadelphia Neurological Society. During his brief medical career in Philadelphia he held many important positions in the hospitals and medical institutions of that city and took active part in the proceedings of its medical societies, to which and in the medical journals of that period he was a frequent contributor. His most important and enduring work, however, was done in the far west. Probably no one west of the Mississippi has stamped his name so indelibly in the history of neurology. He stands, indeed, among the foremost neurologists in the entire country.

Dr. Eskridge was a member of a number of the most important national medical organizations, in all of which he took a deep interest, but in none more than in the American Medical Association, to whose proceedings he frequently contributed. When the American Medical Association met in Colorado in 1899 he was among those who took the warmest interest in welcoming the members of the Association to that state.

He was Professor of Neurology in the Denver University and in the University of Colorado, and was Dean of the Medical Faculty of the latter institution. He was a member and at one time president of the Colorado State Medical Society. He was a member of the American Neurological Association, the American Medico-Legal Society, the American Academy of Railway Surgeons and the American Medico-Psychological Association. At the time of his death he was first vice-

president of the American Neurological Association. Dr Eskridge's contributions to medical literature, chiefly to neurology and medical jurisprudence, were numerous and of a high order. In his writings, as in the practice of his profession, he was distinguished for the carefulness and thoroughness of his work. As a neurologic diagnostician he had few equals. As a medical jurist he was equally respected by the legal and medical professions. As a medical witness, as a teacher and as a writer he was honest in his convictions and in his expression of them. After his health broke down in 1884 it was never fully restored, yet he pursued his ends, which were always honorable, with an untiring zeal. In private life he was retiring and of a kindly disposition. His death is a great loss, not only to neurology and the medical profession, but to the community in which he lived and labored.

ADDRESS OF DR. NORBURY.

The strangely fascinating influence thrown out by the enthusiasts in all professions strikes a sympathetic chord in the heart of the student, touches and dominates his eagerness for knowledge and gives to him that which we call inspiration. It is this inspiration which imparts zeal, which in its turn lends to knowledge that wonderful power for good, that essential for achievement—enthusiasm. "Knowledge without zeal sits in its study, plays with its books and does nothing," but when under the influence of the magic power of working enthusiasm, it accomplishes great things.

All great achievements in life have been accomplished by enthusiasts, zealous in their works and keeping in view the three elements which Abbott says are necessary to real success in life, viz.: "A great work undertaken, a great enthusiasm undertaking it, and a great end kept steadily in view." It is self-evident that as a fundamental requisite to success in clinical research, pathology and practice in the art and science of medicine, enthusiasm stands foremost.

He whom we are here to memorialize was an enthusiast, a zealous enthusiast, a working enthusiast. Most of us, I dare say, learned of him by having come within the magical influence of his enthusiasm; felt the striking of the sympathetic chord and sought to know more of his work by being led on and on into the special field of his labor through the fascination of his originality. Few men in our profession have worked more diligently than he, and few have attained by their own persistent research his breadth of clinical culture; obtained step by step, pushing onward from one influential station to another and being adequate to the highest of them all.

Eskridge was an enthusiastic student of neurology to the last; he worked in his field until he knew the

Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Frederick Peterson, Hugh T. Patrick and H. A. Tomlinson.

technic of his art. He acquired this art largely through his own powers of original research, his analytical discriminations and logical reasonings. He had no narrow views; hence no distortions to mar his conclusions. His freedom from bigotry, his catholicity of mind gave him unusual clinical foresight, and as a result remarkable powers in differentiation. Clinical culture was his, and the vast stored-up mass of impressions gleaned from his many years' work in this rich field, made him the safe counselor, the wise teacher, the able practitioner that he was. He was an indefatigable worker in spite of his physical infirmities—in fact, we may say that his infirmities seemed only to throw into bold relief his mental activity and give brilliancy to his work. It made him intense, absorbing in his work in order that his own sad experiences with disease might be drowned in the delights of intellectual life. Never was there an invalid who bore his maladies so cheerfully or who made so light of the terrible burden which he carried. To better be able to live with his invalidism, he was systematic in his rest and work, aiming to do the maximum with the least physical suffering. Even when within the clutches of his last illness he worked with that same enthusiasm as characterized his early efforts in Philadelphia. Of late years, when he foretold the coming of his end, he worked with singular persistence, doubtless to be perfect in his art—for his was a perfect art—that while he lived he could, at least, write of the specialty that he loved so well. Just here let it be said that this singular persistence of which I have just spoken, is shown in his plan of first mastering his specialty before he began to write for publication.

As a writer his ability was shown in the startling distinctness with which the picture of disease was penned; signs, symptoms and characteristics, diagnosis and differential diagnosis, stand out clearly by the aid of his precision in description. Few contemporaries have surpassed him in this feature of his work. His mind was logical; his thinking, precise and original; and it may be said of him, as was said of Alexander Hamilton, "He could do the thinking of his time."

Eskridge saw the birth of the art and science of neurology as a specialty, and as an American representative, wholly trained in this country (for he had no European experience) he was a leader—a leader of higher thought in the art of medicine; he disposed of many of the supposedly insuperable boundaries surrounding the nervous system and led the way for other workers to invade the mysterious home of mental and nervous activity. By reason of his continuous work he had no hours for emotions of despondency, for until the last work was the panacea for all of his afflictions.

It is not my purpose to follow his life outside of the domain of clinical medicine, for this has been done in a more fitting tribute by his fellows in Denver. To the profession who have attentively studied the literature of clinical medicine, there comes a feeling of personal bereavement in the loss of J. T. Eskridge; he was in touch with all of the great advances being made in medicine, and proved by his own observation the researches of others, and through his logical pen aided in the adoption or disapproval of their work. His own work was always scientific, always lucidly presented in his own rare literary style, and above all, it was never commonplace, because such contributions were never possible with him.

In conclusion, let me speak of his personality, the extra-professional characteristics, as delineated by Dr. Munn, of Denver, before the Denver and Arapahoe Medical Society, at the memorial meeting, Jan. 28, 1902. I

present extracts from Dr. Munn's appreciative and loving tribute to Dr. Eskridge because as a close friend and neighbor he gives, in more fitting language than can I, the nobility of character of that great man whom I know was to admire and to love, and, I may add, reverence.

"Those who have most work of their own can usually find more time to help others than can the idle, the selfish or the unemployed. It was wonderful how many men and women, how many diverse interests, and what different organizations claimed and received Dr. Eskridge's advice upon matters that were not professional. Matters of public and private interest were often submitted to his adjudication; measures of legislation sought his approval before their final passage; the courts were guided by his advice, and public officials deferred to him upon matters of policy. Those having personal knowledge of his stand in regard to many questions thus submitted to him, were impressed by the uprightness of soul and the impartial judgment with which he was gifted in such high degree. That such a man should die so untimely, called from his useful activities when he had reached an age that seemed to entitle him to some rest from the more pressing physical labors of life, yet when his mental and moral capacities might most profitably have been continuously exercised for the whole community, is, indeed, in the largest sense of the word, a public calamity."

"From the hospital and from the home, from the office and from the bedside, from the hovel and from the palace, from the people and the press, as well as from our own profession, the expressions of grief and bereavement at the passing of this man have been practically universal.

"At the bedside of the poor, as well as of the rich, we met him daily; and he was as kindly, as considerate, as conscientious, with the one as with the other.

"And if the hereafter holds for us further opportunities for activity and usefulness, as many of us devoutly believe, we know where we shall meet again this man who clothed the naked, fed the hungry and visited those who were sick or in prison.

"So, we say farewell to the frail body—and farewell to the great soul.

"The laurel and the bay are naught to him; they do but serve to make the lesson of his life and death more precious to us all."

ADDRESS ON AN EXHIBIT OF EARLY (PRIOR TO 1860) BRITISH AND AMERICAN OPHTHALMIC LITERATURE.*

CASEY A. WOOD, M.D.

CHICAGO.

At the outset let me say that the books, pamphlets, atlases, portraits and other illustrations of the early history of ophthalmology in this country and Great Britain are almost entirely derived from the private collections of the members of the committee. In addition to these we are equally indebted to the kindness of Dr. Dennett, librarian of the New York Eye and Ear Infirmary, for a copy of the first annual report, by-laws and other interesting matter relating to the oldest of our ophthalmic hospitals. Little or no notice is taken of the

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. Frank Allport, H. V. Würdemann and J. A. Lippincott. The Exhibit was gathered by a Committee, appointed for the purpose, consisting of Casey A. Wood, Chicago, chairman; Harry Friedenwald, Baltimore; A. A. Hubbell, Buffalo, and A. R. Baker, Cleveland.

numerous monographs (about one-tenth of the whole) on cataract, since Dr. A. A. Hubbell, one of the members of our committee, will address you on that important subject. Particular attention is invited to the library and other relics in this exhibit of Dr. George Frick, which we are able to present through Dr. Harry Friedenwald, by the courtesy of the Medical and Chirurgical Faculty Library of Maryland. Dr. de Schweinitz has kindly loaned the first number of the Royal London Ophthalmic Hospital Reports and a copy of Brigg's *Ophthalmographia*, formerly in the library of the Duke of Bedford.

The exhibit of treatises and text-books, as well as of monographs on the eye and its diseases, will be found to contain, almost without exception, a copy of every work written in English or by an author of British or American birth between 1660 and 1860.

Just as a history of ophthalmology would not be complete—indeed, could not be written—without considering it as a part of the history of medicine, so it is impossible to divorce ophthalmic from general medical literature. The very form in which the fathers of ophthalmology cast their contributions to literature is that of the surgeons of their time. For this reason, if for no other, a full account of even that comparatively small portion of the world's ophthalmic literature which was written in English prior to 1860 could hardly be given, even in abstract, at this time and place. As you know, since the time of the ancient Egyptians attempts have been periodically and repeatedly made to set aside a class of so-called "oculists," but the better sense of the medical community has ever recognized the fact that ophthalmology is not an off-shoot from, but a veritable branch of the tree of medical knowledge, and that as such it can thrive only when in healthy union with the parent stem. I think, therefore, that it is in keeping with this idea of the universality of the medical art and somewhat to our credit that there never has been a distinctive "English" school of ophthalmology, although both Great Britain and America have not only contributed their store of discovery and learning to the common fund, but at one time (during the latter part of the eighteenth century) the former country probably furnished the most distinguished ophthalmologists in Europe.

The writings of modern Egyptologists, and in particular the editors of the Ebers papyrus, furnish us with proof of what had long been suspected, viz., that the Greek schools of medicine derived much of their knowledge of ocular therapeutics from the Egyptian oculists. As you know, medical and surgical specialism had its rise and its perfect fruition in the ancient Nile region. Not only were there exclusive "eye doctors," but the whole body was divided and subdivided among the profession to an extent undreamed of even in our day. From them, through the flourishing Greek schools of anatomy, the Roman oculists (*medici ocularii*) arose, to be in their turn followed by the Arabian ophthalmologists.

In the committee's exhibit will be found a well-preserved, medieval-Latin edition, printed and painted during the years 1489-91 by Boetius of Venice, of that renowned surgeon-oculist Avicenna,¹ or Abu Ali El Hosein Sina, born in Bokhara about A. D. 925. The

fifth book of the folio is entirely devoted to a description of the eye and its diseases. It was mainly from this source that the sixteenth century English surgeons drew their inspiration. Then, as now, it was considered proper in every general work on medicine to set aside at least a few chapters to a consideration of the ocular apparatus and its diseases. Time will permit me to refer to only one of these in the exhibit, an English edition, by Bartholomew Traheron (1543), of Johannes Vigo, that celebrated Italian surgeon who lived at the end of the fifteenth and beginning of the sixteenth century. "Thesemostexcellent workes of Chirurgerye," containing many references to Avicenna, appear to satisfy at least the editor, who, in the usual dedication to the patron, remarks, "whyche thyng if it shall plesse your ryghte godlye iudgemente, and suche as youe be, the barkynges, of other shall lytle trouble me."

Appended to the translation is a glossary for the student. From it we learn that a "cataracte" is a "slymy humour, growen togyther lyke yse, betwene the skynnes of the eyes, cornea and coniunctiua, cometh aboute the apple of the eye." Of collyria "there bene two kyndes thereof. One is liquide and the other is drye, and that they cal barbarously a Sief." Probably the latter reference is to the molded tablet, containing various ingredients, often bearing the name of the oculist imprinted on its surface, a solution of which when placed in water formed a sort of panacea for eye affections. Scotoma is defined as a disease "when darkenesse ryseth before the eyes and when all thynges seme to go round about. This diseases is (also) called vertigo, in latyne, of turnyng about, though some go about (we may imagine the contempt on the editor's face!) to make a follysh difference of scotoma and vertigo."

The first separate and complete treatise on the eye published (London, 1622) in the English language was written by Richard Banister, Mr. in Chyrurgery, Oculist and Practitioner in Physicke. If one compares this text-book with the larger and fully illustrated German work of Georg Bartisch, which, by the way, was published forty years before, we shall find that they both hold up to ridicule and contempt the deeds of those empirics that in their day, as in ours, prey on an ignorant and gullible public. Especially severe is Banister on those "Mountebanks" who fail to observe the well-known surgical rules, thus done into poetry:

Couch cataracts upon a day so faire,
That neither wind nor clouds disturb the Ayre,
When spring with simples fills the Earth's rich lap,
Or Autumne makes the tree put off his cap,
The Moone i' th' full, or in coniunction fly,
Or tracing Aries, or in Gemini.

"Great is the hurt," continues Banister, "that is done to the eyes, being peared with an instrument, in an open and airy place: for the aire getting into it, bringeth many euill accidents to the part, most commonly priuation of sight." Ignoring both these prose and poetic aphorisms the aforesaid charlatans, says he, "take their patients into open markets and there for vain glories sake, make them see, hurting the patient, only to make the people wonder at their rare skill. Some others make scaffolds, on purpose to execute their skill upon, as the French-men and Irish-man did in the Strand, making a trumpet to be blown before they went about their work." However, the punishment fitted the crime more promptly than it does in this day and generation. for "they were called before the company of the Chirurgions, being sharply reprooued, soon left the city and their abusive practice."

1. My attention has been called by Dr. Frederick P. Henry, Honorary Librarian of the Philadelphia College of Physicians, to a still older work—said by Hain to be the first edition of the first printed book on ophthalmology—now in the college library. It is entitled "De oculis eorumque aegritudinibus et curis." It was written by Beavenutus Grassus, and published at Ferrara, by Severanus, in 1474.

Banister early observed the harm that follows the application of acrid and astrigent agents to inflamed and irritable eyes, and frequently protests against such treatment. This is the more to his credit, since in his time disease was regarded as an entity, or at least as an excess of normal or diseased humor, to be driven or purged from the body. "A tender Eye," says he in his *Breviary*, "must have tender and gentle medicines. Sharpe and tart medicines doe exasperate. The white of an egge and woman's milke doeth moysten and cease paine. Metals are not to be used in the beginning (of an acute inflammation). . . . In ophthalmia medicines, they ought to be light and soft, without biting. Allam, copperise, Sandiver, Salt and such like, these used alone, or mixed with other powders or water made from them, must not be too sharpe. . . . I have often healed (eye diseases) with medicines that have no smarting quality at all, which cooleth, comforteth, and strengtheneth the eye. . . . Some in dressing of the Eyes will use some sharp water of allom, copperisse, or such like, three or four times in a forenoone, that so soone as the sharpness of one dressing is past, then beginneth another, and another, as though Rome was built in one day, or a disease in the eye were to be cured in one houre; whereas they do not consider, that much use of sharp medicines, either Collieries, water, powders, etc., do destroy the force of the sight: therefore beware of such hasty healers, who may well be called hasty hurters; for tender partes must be tenderly dealt withall, and that is safe dealing."

Strange it is that in the face of such experiences Anglo-Saxon surgeons continued for four subsequent centuries to inflict their zinc, silver and copper barbarities on the eyes of defenseless patients. Local applications of blue stone, silver nitrate, alum and other metallic substances, mixed with a heterogenous mass of vegetable excipients, gathered at the proper time of the month, with relation to the proper signs of the zodiac, constituted the ordinary treatment of eye affections. The general treatment may also be gathered from Banister's *Breviary*, of which the following is worth quoting: "When paine is exasperated, open a veyne largely in a full body, to prevent great danger. Fiery humours must be evacuated by cupping and horse leaches. Behind the eare is best. Use blistering to the necke. If the disease be stubborne, use visicatories to the top of the head and sutures. Purging the head with pilles, lest that part of the humour unsettled be driven into the Nerve opticts, and thereby cause grievous accidences, as staphiloma and such like, which I have often seene."

The early oculists had troubles like unto our own. "It is an usual custome," says Banister, "as soone as one complaineth of paine or grieve of the eyes, to have amongst twenty women, nineteene severall medicines told presently, little notice of the nature of the disease being taken, and the power of the medicines almost altogether unknowne. Within compasse of the womans Antidotary are roasted apples or crabs, while some of them licke the Eye with their tongues, some put a lowse into the eye, the juyce of goose dung, the white part of hen's dung."

A very fair description of the anatomy of the eye is given by Banister as well as by Wm. Briggs, whose monograph, "*Ophthalmographia, sive Oculi ejusque partium descriptio anatomica*," was published in Leyden in 1686, and is spoken of by Hirsch as one of the most important ophthalmic works of the seventeenth century. This small volume is illustrated by plates showing the

optic nerves joined at the chiasma, but with uncrossed fibers. In his *New Theory of Vision*, presented to the Royal Society, prefaced by a letter of approbation from Sir Isaac Newton, appears the statement, that while there is no crossing of the optic fibers yet single vision is obtained by the irritation of identical parts in the retina. Briggs was probably the first to declare this doctrine, as well as among the first to suggest that accommodation is brought about by changes in the lens.

A first edition of Newton's lectures is presented in our exhibit, and it is not necessary for me to remind you what an important rôle they play in our knowledge of physiologic optics. Query 15, at the end of Newton's "*Optics*," clearly states the hypothesis of the decussation of the optic fibers and their relation to human binocular vision, although it was, later, Walloston who showed just how this occurs.

Inaugural Dissertations and Disputations were not to the same extent a part of early British university life as they were and are on the continent. I have searched several hundreds of these sixteenth, seventeenth and eighteenth century theses in the hope of finding the name of an American graduate of Leyden, Göttingen or Utrecht, who presented a defense of some proposition pertaining to the eye, but have not found a single one, although I think there may be such, and would be glad to hear of any I may have overlooked. Even such students of English origin are few. Here is one, James Lidderdale, whose "*Disputatio Medica Inauguralis de Inflammatione Oculorum*" was presented, in pompous Latin, to the Leyden faculty in 1708, and dedicated, in the usual terms, to his relatives and friends. There are twenty-five pages, three of which are devoted to that serious disease, inflammation of the muscles of the eye! Inflammation of the optic nerve is exhaustively dismissed in half a page and affections of the lachrymal sac in about a third of a page. To my mind the most interesting portion of these two and three-hundred-year-old theses is the occasional appendix. In Dr. Lidderdale's case, five friends, one anonymous, one probably Scotch, one French, one German and one Italian, tell him, in various languages, what a loss the university will sustain and what a prize Scotland will gain when he once more puts foot on his native heath. The English contribution is too good to miss. You will notice that it takes the form of an acrostic:

To the Learned and Ingenious James Lidderdale, A.M., M.D.:

Ingenious Friend

All did admire to see,

Your parts, your learning, and your modestie
In that *De inflammatione oculi*.

Let the admiring croud to admire go on,
Its short of thy desert, when all they've done,
Doctor of Physic and Philosophie;
Deservedly enrol'd M.A., M.D.

Each Faculty you know; to say how wel,
Requires (if possible) those that excel,
Dryden, or Waller, Cowley, Philomel,
Accept my wish, tho in an homely stile
Let still successe on your endeavors smile
And be the fam'd Physician of Great Britain's isle.

The dawn of the eighteenth century saw the rise of many celebrated surgeon-oculists, the best known being Thomas Woolhouse and John Taylor, his pupil. The career of each closely resembled that of the other. Both acquired a continental reputation, though not always of the highest character; both were appointed surgeon-oculist to almost all the courts of Europe; both were

well educated, skilled operators, publishers of many works on the eye in English, French, German, Italian, etc., and both received numerous degrees from the universities of the continent and honors, presents and decorations from emperors, kings, princes and other potentates. Both eventually settled in Paris, where they attracted many students and patients.

From the middle of the seventeenth to the end of the eighteenth century frequent reference is found in Forest, Thomas Hope, Banister and others to the practice indulged in by certain oculists of going about from town to town practicing their art. Although there could not be any objection to a surgeon's traveling about in the pursuit of knowledge and for the purpose of acquiring a wider reputation, yet the circumstances surrounding these journeys, the assumption of superior knowledge, particularly of operative skill, the ostentatious display of a retinue of servants, the wearing of rare jewels, fine clothing, decorations, etc., the undisguised attempt to displace the regular surgeons at the various courts, the publication of long lists of rewards for service and accounts of cures in the families of reigning princes or members of the nobility—these brought into disrepute all peripatetic oculists of whatever degree. Moreover, the success of such men of the Chevalier Taylor type bred a large number of humble and unskilled imitators, who, without any real knowledge of eye diseases or any skill in surgery, went through the country extorting money from the ignorant, couching cataracts and selling panaceas for eye diseases, with the market place or cross roads for their offices and musical instruments to herald their approach. Forest thus speaks of those that about this time spread over Holland and invaded England: "*Sunt enim multi oculistae qui per urbes vagantur et fraudulentè agunt, pecuniarum extorquentes ab aegrotantibus multaque promittentes quae tenere non valent.*"

Woolhouse was the author of a number of works, most of them containing attacks on Maitre Jan, Heister and others. This author was undoubtedly the first to suggest the possibility of making an artificial pupil, an operation later carried out by one of his assistants, Cheselden. Both French and German editions of his interesting treatises—1711 and 1715—on the various operations on the eye performed in his day, as well as a description of the instruments employed, are still extant. Taylor, a student with Haller under Boerhaave, was the more able, more brilliant and more scientific of the two, and it is now admitted that if he did not actually perform the operation, he claimed to have cured strabismus by a myotomy of the recti muscles, so that we must assign to him the honor of being the first to advocate the measure itself. He also described systematically over 240 eye diseases.

It must not be forgotten that the early English surgeons vied with one another in discovering additions to the known and published list of diseases, and thus we find, through the decades, a sort of numerical competition which was reflected in the titles of their treatises and text-books.

Wm. Cheselden, who made the first artificial pupil, was born in 1688, and was famous as an anatomist. He was one of the surgeons to St. Thomas' Hospital. Samuel Sharp, born in 1778, was a pupil of Cheselden and one of those who performed a modified Daviel extraction operation. We must not forget Alexander Monro, (1697-1767), Scotch ophthalmic surgeon, famous, as was Jonathan Wathen, for his studies of the lachrymal apparatus and its diseases.

In 1759 William Porterfield published, in two volumes, his masterly "Treatise on the Eye, the Manner and Phenomena of Vision," chiefly a work on physiologic optics that, in conjunction with the writings of Isaac Newton and Thomas Young, forms an enduring monument to British ophthalmology. You all remember the letter in which our Dr Knapp mentions the tribute paid by Helmholtz to Young—that when, in working out a problem in optics, an apparent contradiction of a statement made by the English mathematician was encountered it uniformly happened that Young was correct. Two English editions of Young's works have been published; the first, his lectures in two large volumes (1807), and the second in three volumes by Peacock, 1855. Of these the earlier edition is to be preferred.

Wm. Rowley, born in 1743, was even better known for his ophthalmic writings. His "Treatise on 118 Principal Diseases of the Eye, in which are communicated several new discoveries Relative to the Cure of Defects in Vision, with Original Prescriptions," dated 1790, is well worthy of perusal. On page 358 is printed an extract from a letter written by one Dr. Benjamin Franklin to "My worthy friend, George Whately, Esq., Treasurer to the Foundling Hospital."

By Mr. X. saying that my double spectacles can only serve particular eyes I doubt he has not been rightly informed of their construction. I imagine it will be found pretty generally true, that the same convexity of glass through which a man sees clearest and best, at the distance proper for reading, is not the best for greater distances; I, therefore, had formerly two pairs of spectacles, which I shifted occasionally, as in traveling I sometimes read, and often wanted to regard the prospects. Finding the change troublesome, and not always sufficiently ready, I had the glasses cut, and half of each of each kind associated in the same circle. By this means, as I wear my spectacles constantly, I have only to move my eyes up or down, the proper glasses being always ready. This I find more particularly convenient since my being in France, the glasses that serve me best at table to see what I eat, not being the best to see the faces of those on the other side of the table who speak to me; and when one's ears are not well accustomed to the sound of a language, a sight of the movements of the features of him that speaks, helps to explain; so that I understand French better by the help of my spectacles.

"I have ordered," adds Rowley, "some of these spectacles to be made by Mr. Bemfleet in Saville Passage, near my house, and have recommended their trial to several people, by whom they are highly approved."

The latter end of the eighteenth century saw the fruition of the art of engraving on steel and copper—now lost or almost lost to us—and Rowley's treatise is well illustrated by drawings reproduced in this satisfactory manner.

There is some connection—sociologic or religious—between the rather sudden disappearance of a belief in witchcraft and the discarding of certain superstitions in medicine, not to be explained altogether by the dissemination of scientific truth. John Fiske has drawn our attention to this curious fact in the matter of the belief in witches in New England and it forces itself on us in a review of ophthalmic writings. In George Bartisch's treatise not only is witchcraft of the eye acknowledged and its symptoms minutely described, but the charms to be worn and the prayers and other means necessary for the prevention of the diseases and its treatment are duly set forth. Comparatively little space is devoted to matters of this character in English publications. Rowley, for example, pleads for a rational treatment of the king's evil, and his work is almost as free of dogmatic statements concerning things

supernatural as is any work written in our own generation.

John Ware, who died as late as 1816, about this time wrote voluminous works on various ophthalmic subjects, most of them published by his son in two volumes, 1818.

Two features particularly distinguish eighteenth century therapeutic literature, viz., long, complicated prescriptions and the search for cure-alls. Examples of these are furnished, for example, by Sir Hans Sloane—him of the Museum in Lincoln's Inn Fields—physician to His Majesty, etc., in a pamphlet, dated 1745, and entitled "An Account of a most Efficacious Medicine for soreness, weakness and several other distempers of the Eye." Thompson's eye water and Petit's eye salve of our day, with a number of minor contestants, now hold the field of popular favor, but the idea of the panacea is the same.

As we approach the beginning of the nineteenth century the first writing on eye diseases by an American of which I can find any account appeared, according to Harry Friedenwald, in the *Medical Repository*, Volume VII, page 28. It is entitled "An account of a case of Fistula Lachrymalis, with reflections on the different modes of operating in that disease." The author is Dr. Pierre Chatard, who settled in Baltimore in 1797, but who does not appear to have made a specialty of eye diseases. From this time forth comparatively frequent and important additions were made to ophthalmic literature, not only in Great Britain, but in America. The British and French ophthalmologists were then the best known in the medical world, although they were soon to be rivaled and eclipsed by the brilliant labors of Barth, Beer, Schmidt and other German surgeons. I have time to mention only a few of the more important.

Sir William Adams wrote during the first two decades of the last century. Following him were many others, authors of complete treatises of goodly proportions, which, as a rule, were well illustrated and especially replete with reliable descriptions of diseases of the eye. I wish to mention particularly J. C. Saunders, the first edition of whose celebrated treatise was published about 1811; G. J. Guthrie's "Lectures on the Operative Surgery of the Eye," which were published in London, 1823; John Vetch, "A Practical Treatise," London, 1820; A. Watson's "Compendium," Edinburgh, 1828; Wm. Lawrence, "A Treatise on Diseases of the Eye," 1833; Benjamin Travers, a deservedly popular text-book, with several editions, first issued in 1820; Middlemore's treatise, two volumes, published in 1835; Morgan's volume of lectures in 1839; F. Tyrell's two-volume treatise in 1840; Walker's "Vade-Mecum," in 1843; Haynes Walton, and Wharton Jones. Last, but by no means least, we note the appearance of the first edition of the greatest of all the British text-books, by Wm. Mackenzie, in 1830.

The works of most of these ophthalmic writers—and I have by no means given a complete list of them—ran through several editions, and a few of them were translated into foreign languages. The treatise of Jno. Cunningham Saunders is of especial interest to us because it was the first complete work on disease of the eye published in America, having issued from the press of Benj. Warner at Philadelphia in 1821. It was very appropriately dedicated to his teachers of anatomy (of which Sir Astley Cooper was one) and to the officers of the London Infirmary for Curing Diseases of the Eye, whose legitimate descendant is the Royal London Ophthalmic Hospital, better known as Moorefields. Saunders was undoubtedly the first to propose a special hospital for eye diseases, and was the founder of this one, which was

opened for the reception of patients in March, 1805, although the Royal Westminster Infirmary was formed and established a few months previously. Saunders was not fated to enjoy, for any length of time, the practice of the house he had built. Symptoms of organic disease of the brain developed in the beginning of 1809. Although the disease interfered greatly with his work, he refused to take the needed rest from his arduous labors. The description of the eye symptoms in his case is interesting, one might say almost pathetic, viewed from the standpoint of our time. "He was affected with an imperfect amaurosis of the right eye. The eye was carefully examined, but the pupil was found to be of its proper size and figure—objects, besides being obscured, were diminished in size and deranged in position, the accurate distinction of colors was lost." After nearly a year of suffering he died in January, 1810. The first edition, most of which was written while barely able to hold pen in hand, was edited by his friend J. R. Farre, illustrated by colored engravings and published at the expense of the infirmary for the benefit of his widow.

(To be continued.)

Original Articles.

A MODIFIED FORM OF TEST-CARD AND TEST-LETTER.*

ELMER G. STARR, M.D.
BUFFALO, N. Y.

The importance of painstaking care and accuracy in determining the refraction of the eye is well understood by the ophthalmologist of to-day. Indeed, in America, those in the front rank in every department of medicine recognize the great value, for the relief of many disturbing conditions, of accurately correcting refractive errors. Any suggestions which may render results more certain are of value, and the careful ophthalmologist will spare no effort to reach a decision as nearly correct as possible, well knowing that what appears to be a slight error in the measurement of any eye's refraction may render valueless the work of making the measurement, and cause a failure of his attempt to relieve a patient of some distressing condition.

The question of illumination, the position of test types with reference to patient and light, and even the arrangement of the case of test lenses, all are worthy of attention. Since, with few exceptions, our final determination of the refraction is made with test lenses and test types or letters, these occupy the place of chief importance in this work. No great change, in the way of improvement, has been made in test-letters since the classical work of Snellen in 1862. He investigated the problem thoroughly and gave us the geometric letter of definite size and proportion of line. For general use the letter must still be the best form of test-object, as it best serves to indicate the accuracy of the patient's judgment as shown by the correctness with which he names the letters. Much of the difficulty experienced, and the uncertainty of results reached with this, the final method, depends upon lack of careful and accurate observation on the part of the patient; and much of the "refractor's" success depends upon the aid which he gives the patient, in educating him to observe nicely;

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. Frank Allport, H. V. Würdemann and J. A. Lippincott.

for few persons observe comprehensively when subjected for the first time to a test of this kind.

That there are objections to the test card, as ordinarily employed, I have long been convinced. One of the most serious of these is that it quickly produces retinal fatigue, a result which is caused by the glare of light reflected from the surface of its white background. This is a very important factor in causing fatigue of the eye and lessening its sensitiveness to slight changes in distinctness of outline of the small test letters. Dr. Gould of Philadelphia has devised a card which is free from this objection, by making the ground black and the letters white. In this form of test card there is, however, an objection and that is the effect of irradiation seen about the letters, an effect observed when a small white body is viewed against a large dark background. The effect of irradiation is to increase the apparent size of the small object and at the same time to lessen the sharpness of its outline. Except in intense illumination, the effect of irradiation is not observed with a small dark body on a light ground. Another imperfection in the ordinary test-card is shown in the fact that with nearly all eyes, save those having very acute vision, the decision regarding the glass which gives sharpest outline to the letters is often uncertain within $1/4$ d., and in low amounts of astigmatism the position of the axis is uncertain within an arc of 5 to 10 degrees.

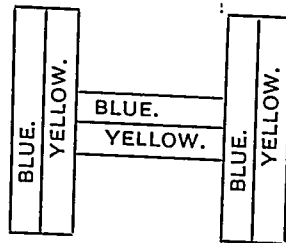
While it is evident to any one at all familiar with the subject, that no device can make the task of measuring the refraction a simple or easy one, yet I think that some of the difficulties encountered may be eliminated or lessened. As the result of an attempt to avoid some of the objections to the ordinary form, I have devised a series of letters which I here show. Some of the letters, it will be observed, are in color on a ground of another color, while others are built up of two colors and are on a ground of neutral color. The two colors used are, in both instances, yellow and blue; colors which are complementary. The reason for using these two colors will appear later on. By using a background of color, the glare of light and retinal fatigue resulting therefrom is lessened, and we are enabled to take advantage of, and utilize, the phenomena of contrast of colors in such a way that the lessened illumination is not a disadvantage as would be the case with a test-card of black letters on a white ground. It is well known that a color can be materially changed in brilliancy and saturation by altering the color which lies adjacent to it. Without entering into a detailed examination of the laws which govern the result, it is sufficient to say that when a colored object, such as a letter, is seen on a ground of complementary color, the color of the letter is strengthened and made more saturated and brilliant. That this must be so is evident when we reflect that the after-image of a colored object is always in complementary color. This phenomena is most noticeable when two colors are contrasted successively in the following manner: A small square of black paper is placed on a sheet of yellow paper (any other color might be used) and the attention is directed to the edge of the former. If now the black square be suddenly removed the observer sees in place of it a luminous spot which in this case will be yellow, but what is remarkable is the fact that this yellow image or ghost will be more intense and saturated in color than the rest of the ground. The rest of the yellow paper will appear as if gray or white had been mixed with it. This experiment succeeds with paper of any bright color, and Helmholtz has shown that the same effects are obtained with the use of pure spectrum

colors. If instead of employing a black square we take one which has a color complementary to that of the ground, in this case blue, the result is much the same as before, except that the yellow ghost is now still more intense and brilliant in color.

These phenomena are cases of what is called successive contrast, because we look in succession from one surface to another. When colored surfaces are placed in juxtaposition and viewed in the usual way, successive contrast still plays an important part, and the appearance of the colors is still modified according to its laws; for although we attempt to confine our attention to only one of the colored surfaces, the eye involuntarily wanders to the other; for absolutely fixed vision is quite opposed to our common habit, if, indeed, it be not an impossibility.

Yellow, being the most luminous color in the spectrum, is selected for the ground and blue, its complementary, the color for the letter. Not only is the blue letter more sharply defined, by contrast, but the yellow field also gains in brilliancy, in the same way. By filling in much of the field with black, leaving the background of yellow only sufficiently large to give the proper effect of contrast, we still further diminish the amount of harmful light which can reach the eye. In practice it is found best to have the yellow ground for each letter about three times the diameter of the letter, in the small letters. All else may be black. By this means we still further increase the brilliancy and contrast of the yellow and blue. The letters are of the proportions of those generally used. In practice I find it advantageous to employ letters of a slightly smaller angle than $5'$ in measuring the refraction, as in this work the aim should be to get the best possible vision—not to be content with $20/20$, or what is commonly designated "normal vision."

Referring now to the letter built up in two colors, I will say that the object aimed at in thus making a compound letter is to produce a more sensitive test object than we have in the solid letter; something which will make more evident any lack of perfect focusing of the retinal image and, therefore, make it easier for the patient to be accurate in his decisions regarding the effect of different test lenses. The letters are made up of two colors which are complementary, one-half of the letter being blue, the other half yellow. The colors are laid longitudinally on each line of the letter, and the background is gray.



A mixture of complementary colors produces gray, and a letter which is built up, in this way, of complementary colors, will look gray to an eye which, through lack of proper focusing, receives the mixed colors on its retina. If, now, the letter is on a gray background as described, the eye can not distinguish the outlines of the letter, and with proper adjustment of colors the letter will be quite invisible. A slight overlapping of the colors, from imperfect focusing, gives the letter a gray appearance, like its ground, and a lens which corrects this overlapping and brings each color sharply into focus produces a much greater contrast than is the case with a black solid letter on a white ground.

Theoretically, any two complementary colors might be used, but practically, I find blue and yellow the most satisfactory, as they each offer the greatest contrast with gray and allow of a smaller letter being used than is the case with any other two complementary colors. It is important that the blue and yellow of which the compound letters are built up be true complementary colors as otherwise a pure gray does not result from their mixture. The proper colors must be determined by actual test with the rotating disc of Maxwell. The colors here used are, for the blue, cobalt blue mixed with a weak solution of gum arabic, just sufficient gum being used to bind the color to the paper; and for the yellow, a thin wash of gamboge mixed with water. These colors when mixed by a rotating disc produce a gray known by paper dealers as platinum gray or platina. Red and green, when mixed, produce a very light gray, but they offer a poorer contrast, separately, with gray, so that the retinal image must be increased in size by increasing the size of the letter to such an extent as to destroy its value as a test for visual acuity, and to greatly lessen its value for purposes of refraction. A letter made up of yellow and blue must be larger, but not greatly so, than a letter of solid color, to still be visible at the normal distance and when properly made is a very sensitive test object. In practice, I find it advantageous to combine the two forms of test-objects here described. The solid letter is the better index of visual acuity and the bi-colored letter is the more sensitive test-object for use in measuring the refraction.

DISCUSSION.

DR. GEORGE M. GOULD, Philadelphia—Speaking of his very ingenious device, Dr. Starr alludes to a test card which I have used for several years, which is black with white letters, and finds that the effects of irradiation trouble him. I illuminate my cards very brightly, and place them at such angle that there is no sheen. I have nothing to complain of as to the irradiation. The card is devised according to the physiologic principles of the eye, the black being a non-stimulant of the retina, does not fatigue the eye, especially when the accommodation is paralyzed. So with this card I often put down normal vision as 20/15 and very often patients can read 20/10. I can read 20/10 easily with it, because the retina acts physiologically. I think Dr. Starr's ingenious device deserves further consideration, but it seems to me that the greatest contrast between stimulation and non-stimulation must be between black and white.

DR. B. A. RANDALL, Philadelphia—It seems to me that the prime conception as to test-letters is often lost sight of, and this is partly to be laid at Snellen's door, since in making the 5-minute letter he did not make more plain that he was testing the vision with its parts and interspaces of 1 minute. Therefore, a letter, whether of 5-minute angle or less, is not a test if its parts are not such as to make the interspaces 1 minute. In using the simple letters, as in the card of Dr. Gould and Dr. Starr, everyone finds that 20/20 is not the normal, but that lower lines can be read.

The matter of irradiation is a factor in the construction, as noted 20 years ago by Giraud-Teulon and Javal, and the doing away with this is of importance in our work and is well secured in a great many of the letters in general use, the best being that of John Green of St. Louis, where the terminal additions are half-blocks. The irradiation which is reduced by this can be made almost nothing by having the card, not the bright yellow, but merely a cream color or India tint. To those of you who are going to construct letters, I would say do not make the common error as to the size of your letters, for 99 out of 100 make the letter according to the tangent of the angle, while twice the tangent of one-half the angle is the proper thing; and see that each part and interspace subtends 1 minute. We can not be too precise in dealing with this subject.

DR. E. J. GARDINER, Chicago—I would like to ask Dr. Starr if the irradiation that troubles him may not be due to uncorrected astigmatism?

DR. STARR, in closing—In reply to Dr. Gardiner, it is certainly worse in such a condition, but I get it at all times with my own eyes. In regard to the form of the letters I can hardly agree with Dr. Randall. I prefer to test by means of the lines, rather than by the interspaces of the letters, and to use a line subtending a smaller angle than 1 minute. I want the patient to be familiar with the letter under observation, and to carefully observe which lens gives the sharpest outline of the letter.

METASTATIC SARCOMA OF THE CHOROID.*

MEYER WIENER, M.D.

ST. LOUIS.

Next to glioma of the retina primary sarcoma of the choroid is the most frequent intra-ocular growth. Metastatic, on the contrary, is extremely rare and has only been authentically reported by Shieess-Gemusens, Pflüger and De Schweinitz. In Norris and Oliver's System of Diseases of the Eye (1898), Hill Griffith, in his article on sarcoma of the choroid says: "Sarcoma of the choroid is always primary, always single and generally more or less deeply pigmented; it never affects both eyes." We are all familiar with the saying of Virchow that in those organs which show a special disposition to nurture new growths, metastatic foci are seldom seen. Thos. Axenfeld, in a review of "Tumors of the Eye," published in 1897, says: "We know of only two positive cases of metastatic uveal sarcoma; those of Pflüger and Shieess-Gemusens and Roth." In Pflüger's case one eye became blind while in the other a tumor formed in the anterior chamber, with episcleral nodules following an enlargement of a nevus in the region of the right parotid. A microscopic examination was not made. Uthoff seems to think these two cases were metastatic carcinoma. A. V. Meiggs and Dr. de Schweinitz report a case of "Double-sided, flat choroidal tumor on posterior pole in a case of sarcoma of the anterior mediastinum" as follows: "A 21-year-old laborer had tumor of anterior mediastinum (which is described as round-celled sarcoma), numerous metastatic nodules in the brain, especially on base; marked tumor thickening of optic nerve as well as motor oculi and orbital muscles. Double-sided independent tumor of choroid." This case, according to Axenfeld, seems to correspond with one of three cases of metastatic "malignant lymphoma," which began also in the mediastinum but in these three cases there were no intra-ocular growths. Cases have been reported by Mitvalski, Eschling, Uthoff, Kamoki, Schulz and others, of metastatic carcinoma of the choroid. In not a single text-book of ophthalmology that I possess is metastatic sarcoma of the choroid even mentioned.

In the case which I have to report both eyes were affected, and I procured one of them. The eye was removed from behind, the cornea, lens and ciliary body being left in the orbit. Only the posterior half of the globe was removed. The retina was completely detached, during the removal most likely, as it seemed to be of normal microscopic appearance when stretched out.

In this eye I find sarcomatous patches which are visible on macroscopic examination, and all varying in general appearance as to size, color, etc. The largest and most prominent lies just below the optic nerve entrance and apparently just including it. This patch is of oval

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. Frank Allport, H. V. Würdemann and J. A. Lipplincott.

shape, $8\frac{1}{2}$ mm. long in vertical diameter by 6 mm. wide in the horizontal; has white, lustrous, smooth appearance, clear and distinct outline and raised above surface about 0.5 mm. Immediately above this is a circular patch 3 mm. in diameter of the same appearance as the former in the center, but pigmented toward the circumference. Three mm. to the temporal side of this last patch is an irregular, ragged rectangular-shaped one, 6.0 mm. long by 4 mm. wide, of reddish color (probably from choroidal pigment), in some places darker than in others. This patch, unlike the others, has an uneven, broken surface, elevated in some places to about 1 mm. Two more sarcomatous areas are visible, one just below the macula lutea, the other just to the temporal side. Both of these are whitish with here and there deeply pigmented spots. Optic nerve seems to be somewhat swollen behind its entrance.

Microscopically, these patches are seen to be chiefly of the small round-celled type, with some spindle cells; growth is traversed by many blood vessels and channels. The growth is located chiefly in the tunica vasculosa, involving also, where it broadens out, the chorio-capularis. Here there seems to be a special cell proliferation or accumulation from the lamina vitrea. Surrounding each patch are more than the average number of vessels, filled with blood, and some of these attaining large size. Scattered throughout the growth some choroidal pigment can be seen having undergone degeneration or change of shape in many instances. Optic nerve is swollen and somewhat thickened at the entrance to the globe, but there is no infiltration of sarcoma cells.

I am indebted to Dr. Willard Bartlett for the following postmortem report:

City Hospital, April 26, 1900. Permit No. 500, Div. 5. Name: B. C. Admitted April 18, 7:10 a. m. Died April 25, 6:30 p. m. Age 26. Nativity Vermont. Cadaver of a tall man, of slender, bony frame, poorly muscled with scant subcutaneous tissue.

Skin.—Skin is of a pale, grayish color. Beneath the skin of the scalp, face, chest, abdomen, upper extremities, inguinal and femoral regions, back and buttocks, are nodules over which the skin is movable and intact. The nodules are also movable on their bases. They vary in size from a buckshot to a hickory nut and are in consistency reasonably firm. On the left buttock is one pedunculated prominence the size of a large walnut, its convex surface showing a loss of substance. On the posterior surface of the sternum are various nodes varying in size from a buckshot to that of a hickory nut. Following the course of lymphatics in anterior mediastinum are similar nodes which are of a light-gray color.

Pleuræ.—The anterior and posterior aspects of both pleuræ are studded with nodules of same shape and color as those before mentioned. The pleuræ are non-adhesive and sac contains no unusual contents.

Heart.—On opening the pericardium there is seen a similar collection of nodules on visceral surface. The heart corresponds in size to fist of the individual and the apex is formed by the left ventricle. Nodules are seen beneath endocardium.

Lungs.—Fairly voluminous. Right lung is retracted. On section the left lung, upper lobe, is seen to be the seat of a decided interstitial change, there being small amount of air-containing tissue; also areas of miliary pneumonia and hepatization. The lower lobe is thickly set with nodules.

Pharynx and Esophagus.—Mucous membrane coated with a mucopurulent mass. The retropharyngeal lymph spaces show nodules in size from a buckshot to that of a hickory nut. The tongue one inch from tip presents on right side a thickened area the size of little finger nail.

Larynx and Trachea.—Have their mucous membranes intact and covered with mucopurulent mass. The peribronchial nodes are decidedly enlarged, one presenting a node when split the size of a large hickory nut.

Spleen.—Size $16 \times 11 \times 4\frac{1}{2}$ cm. Presents on convex surface several nodules of various sizes and within parenchyma are felt numerous others. On cut section are seen projecting from the softened, grayish-red splenic pulp, nodules varying in size from a buckshot to an English walnut; many of these depressed and red at center. The edges in all instances yellow. Trabeculæ and follicles not seen.

Suprarenal Capsules.—Left slightly enlarged: Right measures $6 \times 6\frac{1}{2} \times 2\frac{1}{2}$ cm.

Kidneys.—(Left.) Ureter and vessels as usual. Fatty capsule contains numerous nodules of varying sizes and but little fat. Kidney itself is in size $13\frac{1}{2} \times 7\frac{1}{2} \times 4\frac{1}{2}$ cm. On cut section as well as on outer surface are immense nodes varying in size from a small shot to a hickory nut, many with reddish but slightly depressed center. Cortex wide and in part slightly clouded. Medullæ singularly free from growths, pelvis, however, presenting nodules. (Right kidney.) Ureter and vessels as usual. Size slightly less than that of left side and involved in same manner.

Liver.—Size, lateral 26; vertical 19; antero-posterior 7 cm. Outer surface in general smooth. Color, intense reddish-brown. Presents on anterior surface three large nodules, one of which has a reddish depressed center. On cut section is seen but one nodule. The central veins are decidedly wide and depressed. Organ contains a large amount of blood. Consistency firm.

Mesenteric Lymphatic Nodes.—In part involved, some nodules being as large as a small hickory nut. Grayish-red in color and of moderate consistency.

Stomach.—Interior presents mucous membrane swollen, clouded and bile stained; and, in addition, numerous ulcerated patches varying in size from a split pea to that of a dime, extending $\frac{1}{2}$ cm. above surface, soft and ulcerated. There are felt in stomach wall numerous nodules about the size of a buckshot.

Intestines.—(Small.) Nodules of varying sizes, a few of which have ulcerated into lumen of gut; in addition, a few ulcerated patches, the size of a dime, apparently tuberculous. On the opposing serosa is a miliary granulomata. There, in addition, beneath the mucosa and serosa are grayish nodules the size of a hazel nut, a few of which are broken down into the intestine. (Large.) Aside from moderate filling of submucosal veins, no irregularities. The rectum is immensely distended. Breadth 15 cm. Mucous membrane decidedly pigmented, otherwise as usual.

Pancreas.—Size $13 \times 4 \times \frac{1}{2}$ cm. Its tail is thickened and shows marks of adhesions to surrounding structures. On section are seen similar nodules as those described disseminated throughout entire organ.

Bladder.—Mucous membrane intact; wall of usual thickness, and cavity slightly dilated. At the right of median line and at $\frac{1}{2}$ cm. behind the verum montanum is one nodule lifting the mucous membrane, the same the size of a small hazel nut.

Brain.—Base of brain is, as far as vessels are concerned, uninvolved. Nerve trunks are as usual. The cortex is marked by circumscribed hemorrhagic areas varying in size from a split pea to a ten-cent piece. Pia mater is as usual. The cortical surface: $\frac{1}{2}$ cm. from corpus collosum, in opening lateral ventricle, is seen to be the seat of a hematoma the size of a hazel nut. The ventricles contain the usual amount of the usual fluid and are not dilated. The fourth ventricle and aqueduct of Sylvius are, as regards contents and size, as usual. On making the horizontal grand incision on the right side, there is seen immediately beneath the corpus striatum in the temperosphenoidal lobe, a hematoma the blood of which is clotted and about the size of an English walnut. In the cortical portion of the frontal lobe, 1 cm. beneath the surface, is a hematoma the size of a hazel nut, contents fluid and brownish-red in color.

Cerebellum.—Macroscopically, as usual. Pons and medulla show no evidence of change.

Arteries.—On opening internal mammary artery it is seen that the nodules that lay in close proximity do not invade the lumen of the vessels. The lumen of aorta is narrow.

The origin of the dorsal arteries is irregular. Vessel wall is thin and highly elastic, the intima showing slight fatty metamorphosis.

Groin.—The mass in left inguinal region is as big as a turkey egg, consisting of irregular nodes, black in color, and rests on the Sartorius muscle, Poupart's ligament and the structures between forming the floor of Scarpa's triangle. The branches of lumbar plexus which pass under Poupart's ligament are uninvolved in greater part by the growth.

Spinal Cord.—Lower portion, dorsal region, are found, lying posterior to cord on dura mater, several flattened, rounded tumors, varying in size from a buckshot to a medium-sized hazel nut.

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DISCUSSION.

DR. EDWARD JACKSON, Denver—I would like to ask Dr. Wiener if he got the history at all.

DR. WIENER—I did not get any history from the patient and did not see the case until the patient was dead. I only reported the case because of its rarity. The growth probably started in the mediastinum and it seems to correspond in many ways with the case reported by Dr. de Schweinitz.

ONE THOUSAND PERSONALLY CONDUCTED CASES OF ETHYL CHLORID NARCOSIS.*

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After an anesthetic has been demonstrated to be effective, the next absorbing and vital question is its safety. On this score the brute force alone of numbers is telling, and I hope, therefore, in this narrative, to carry conviction in this direction on the basis of one thousand personally conducted narcoses with ethyl chlorid, and some collected statistics. These thousand narcoses were all conducted with ethyl chlorid sold under the trade name of "Kelene" and a mask of my own devising, described in previous communications.¹ For the present I must insist on the use of the above variety of ethyl chlorid, since other preparations marketed in this country, ordinarily intended for local anesthesia by freezing, are impure, containing methyl chlorid to facilitate evaporation. Furthermore, it happens that the above mentioned preparation of ethyl chlorid is the only one thus far provided with a suitable automatic cutoff to control the escape of ethyl chlorid, which issues from the vial in a very large stream. A number of masks described in foreign literature are not only ineffective but very costly. This simple, inexpensive device covers all requirements. The rubber cone makes an air-tight space about the nose and mouth; on to the gauze surface the ethyl chlorid is sprayed, the stream being released intermittently, from a distance of six to eight inches. Other details have been described in previous articles, and I would, therefore, limit my remarks to answering such criticisms as have come to my notice.

Does success attend its use in every instance? No more nor less than can be said of the other anesthetics. We estimate that in 95 per cent. an absolutely satisfactory anesthesia was obtained. This anesthesia sets in

promptly, at intervals of a few seconds in infants to three minutes in adults, and the awakening is equally as prompt. During the narcosis the color is natural and there is tolerable relaxation of the muscles. The giving of the anesthetic is controlled by the same criteria that hold good for other anesthetics. Mention is made in one of my previous writings of a layer of "hoar frost," resulting from the combination of the vapor of the breath with the ethyl chlorid, which forms on the gauze. I have now learned to regard this rather as a favorable than a deterrent factor, provided the frost be not allowed to form in too thick a layer so as to intercept all access of air. This "hoar frost" constitutes a storage depot for much of the ethyl chlorid and thereby facilitates narcosis. If a mask so saturated with this layer of "hoar frost" be applied to one's own face as for purposes of inhalation; no chilling of the inspired air will be perceptible, but a decided odor of a very pleasant nature is appreciated, and if the application of the mask be persisted in a little longer a sense of dizziness overcomes one. No untoward experience has resulted from the inspiration of air chilled in its passage over the frost, since the vapor of ethyl chlorid is dispelled, expanded and warmed in the pharynx before being taken up in the lungs.

Most of the observers advise spraying the ethyl chlorid in the various devices employed, in great quantity at once. This is unnecessary and likely to be dangerous. Perfect safety and great economy are insured by spraying intermittently. To guard against an interruption of the anesthesia by temporary occlusion of the capillary opening in the vial, an additional tube should be kept at hand. The stream must at all times issue in full force, since a dribbling stream will be attended by failure.

Children and young adults constituted about 75 per cent. of the instances in which this anesthetic was applied, and it has been remarked that the brilliant results witnessed were obtainable with all anesthetics in children. This is not the case. In the first place, the onset of the anesthesia is more rapid than with the other agents, and then the hasty awakening and remaining so from an immediately preceding profound narcosis is peculiar to none of the other anesthetics. For ambulatory practice this feature is only rivaled by laughing gas. Relaxation of all muscles is manifested in the state of profound narcosis; it is seen at its best up to adolescence, thereafter more or less rigidity is at times encountered. This is more so apt to follow when the reflexes are heightened in the inflammatory conditions demanding operation. In old age this anesthetic again operates as in infants, thus a successful reduction of a dislocation of the shoulder of long standing was effected thereby in a woman 80 years of age. To overcome the objectionable rigidity, I have in a number of instances administered morphin sulphate, gr. 1/4, as a preliminary. In proportion as the patient is addicted to alcohol, ethyl chlorid will cease to act favorably, wherefore in outspoken alcoholics a preliminary use of morphin hypodermically will insure a good anesthesia. Adults can be sufficiently anesthetized to do any minor operation of well-defined limits, but often at the expense of ethyl chlorid in large quantities.

Up to this point laughing gas is a strong competitor, but as cyanosis is never encountered with ethyl chlorid the latter takes the lead, also outstripping nitrous oxid on the score of portability and the cost of application. As the field of ethyl chlorid is only for minor operations, it must be pitted against nitrous oxid. The latter

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.

1. Medical Record, April 6, 1901; Medical News, Aug. 3, 1901.

has the greatest record statistically for safety, its death rate being placed at 2 in 1,500,000.² For ethyl chlorid, I am able thus far, conjointly with my own 1,000 cases, to present you a record of 12,436 with but one bona fide proven death, forthwith to be narrated:³

A day laborer, 41 years of age, muscular, alcoholic, extensive ulcer of the leg. A transplantation operation was contemplated. Kelene narcosis for two minutes; extensive excitation; more kelene injected on the mask after three minutes. The blood being dark the mask was removed; cornea and pupil reflexes abolished; defensive motions with extremities; rigidity of the jaws; spasmodic breathing; cyanosis. Pulse was perceptible but not countable owing to the rigidity of the muscles; then followed an intermission of the pulse and death. The succession of events was instantaneous, the whole interval of time comprising three minutes. Five grains of ethyl chlorid were used. Artificial respiration was kept up one hour, camphorated oil injections were used, patient placed in the Trendelenburg position, cardiac massage, galvanism of the phrenics, all of no avail.

Postmortem.—Eccentric hypertrophy of the heart; fatty degeneration of the cardiac muscle; extensive arteriosclerosis of the coronary arteries; sclerosis of the aorta in moderate degree. Blood in the heart and veins of a cherry-red color, fluid, but not coagulated. The blood recalls poisoning by coal gas. No ecchymosis in the pericardium or pleura; no edema of the lungs. The absence of ecchymosis is noteworthy, hence no asphyxia can be charged. Extensive arteriosclerosis of the coronary arteries was assigned as the cause of death.

Lotheisen advises using but three grams at once and then to spray one gram of ethyl chlorid per minute until two grams are given. If marked excitation and cyanosis occur they demand the removal of the mask.

The details of another published death⁴ wrongly attributed to ethyl chlorid, I must needs bring to your notice. The consultant physician's statement is as follows:

A female, 55 years of age, kypho-scoliotic, came for the extraction of lower molars to her dentist. She was at times subject to cardiac derangement and within the year had suffered from a fracture of the rib and later from an attack of left hemiplegia. I had not seen her for one year until the message came that the patient was unconscious after a tooth extraction. I found the patient unconscious, automatic reflexes, absent corneal reflex, pupils contracted, jaw hanging, tongue not retracted, but limp; respiration intermittent, at intervals of two to three seconds two or three respirations, and at times deep sighs; expiration very slight; then another interval followed by the same type of respiration. Pulse 84, regular. The heart sounds clear; lungs free from disturbance; temperature 36.2 C. Color of the skin not blue, rather bright red cheeks. No odor emitted from the mouth; no vomiting; no incontinence. Flagellation and all else does not rouse her. Attempts at artificial respiration were of no avail; camphor and ether injections to the number of eight were ineffective.

The dentist's narrative reads thus:

The fear not unusual with a patient approaching the dentist's chair manifested itself in our patient. At 10 A. M., after drying the gums, moistening them with glycerin and guarding against the unnecessary inhalation of ethyl chlorid by covering the middle and index finger with a napkin and surrounding the lower teeth to be extracted, I sprayed the ethyl chlorid, at a distance of 35 cm., on the gums until they were blanched. Extraction required about twenty seconds, and two grams of ethyl chlorid were used. Following subsequent rinsing of the mouth, her head suddenly dropped, jaw sank, the face became pale and the eyes were dull and fixed. The pulse was weak. I exercised traction on the tongue, practiced artificial respiration, and provided for the access of fresh air. All this I kept up until 3 p. m. Until 10 o'clock at night

this collapsed condition continued, the pulse gradually weakened and accelerated up to 110; the respirations were 24. At 2:30 the next morning death set in. This was no asphyxia, but a suspension of consciousness and then a paralysis of respiration; finally terminating in cardiac paralysis. After the use of ethyl chlorid narcosis promptly set in, and so quickly were the cerebral functions in abeyance that the cortical centers and medulla became paralyzed. After fourteen hours death supervened.

This case of death attendant on the use of ethyl chlorid I can not let pass unchallenged. In the first place, ethyl chlorid was not used as advocated for narcosis. It was sprayed into the oral cavity in concentration. In the second place, the patient had one year ago experienced an apoplectic stroke, she was scoliotic and had compensatory changes traceable to cardiac insufficiency. Syncope set in immediately following the extraction. Similar phenomena are experienced in the first stages of chloroform and ether operations, particularly in operations conducted about the head and neck. Death under such circumstances has always been put down to reflex inhibitory action on the heart exerted through the vagi. In this fatal case of Seitz' death did not set in until fourteen hours later. Ethyl chlorid is too fugacious and too quickly eliminated to act thus long upon the system. From the vivid word picture of the patient's condition (note the description of Cheyne-Stokes' respiration) it is not far fetched to gain the impression of a possible apoplectic stroke perhaps due to embolism from the heart. Finally, the cause of death was not proven postmortem.

In Kocher's clinic there is mention, *en passant*, of a death under ethyl chlorid, but with no further detail whatsoever. It has subsequently been learned that in this instance the ethyl chlorid was not pure and not properly applied.

If these three deaths be unqualifiedly accepted, the mortality in the use of ethyl chlorid for narcosis approaches that of chloroform; if not, it stands between that of ether and gas. But we must be mindful that were all ether and chloroform deaths unstintedly reported we should have a higher mortality.

Symptoms bordering on fatality I have in my series encountered six times. In each instance they were those of respiratory interference and they occurred as the outcome of neglect of attention to the retro-placed tongue during the stage of profound narcosis, or a disregard of sufficient admixture of air. The fact that all of these patients recovered under artificial respiration speaks very favorably for ethyl chlorid. Thus Schleich⁵ found when he profoundly narcotized rabbits up to the point of respiratory paralysis with ether, chloroform and ethyl chlorid respectively, the animals succumbed to the former two, but were capable of resuscitation by artificial respiration when asphyxiated with ethyl chlorid. I have seen respiration in no wise adversely influenced, but if patients withhold from a free and easy respiration the ethyl chlorid will evaporate and not act as quickly. Such subjects as become deeply anesthetized breathe stertorously. Salivation I have never encountered.

Fritz König⁶ in animal experiments conducted on rabbits and monkeys, noted that in rabbits the respiration was accelerated and at times spasmodic. This was due to irritation of the respiratory center. In monkeys, however, this was wholly absent, and compared with ether given to apes, ethyl chlorid is far less dangerous.

3. Lotheisen—Muench. Med. Woch., 1900, No. 18, p. 601.

2. Dr. Charles M. Buchanan. Medical News, vol. Ixii, April, 1893.

4. J. Seitz: Chloretethyl Tod. Corresp.bl. Schw. Aerzte, Jahrg. xxvi, 1901, No. 4, p. 97.

5. Schmerzlose Operationen. Berlin, 1894, p. 43.

6. Ueber Aethylchlorid Narkose. Inaugural Dissertation, Bern, 1900.

These advantages claimed for ethyl chlorid obtain only when a due admixture of air is provided for. I have used ethyl chlorid with the labored respiration accompanying operations for empyema in three instances and I can pronounce it an ideal agent for this purpose. In retropharyngeal abscess with difficult respiration, it has also admirably stood the test in some twenty instances.

Some of the unpleasant experiences recounted were traceable to infants in whom we could subsequently make out the existence of the status lymphaticus (enlarged tonsils, enlarged adenoids and retropharyngeal lymph glands). We must not, however, jump at the conclusion that ethyl chlorid should not be used, therefore, in operations for adenoids, since the presence of the status lymphaticus once assumed would forbid the use of any anesthetic. Those who operate on adenoids quickly and who would take advantage of the expiratory efforts in the awakening to expel the blood, will see the advantage of this over nitrous oxid anesthesia with its invariably accompanying cyanosis and rigid jaw, and its superiority over a primary superficial narcosis with ether with its drawbacks of persistence of odor and prolonged nausea.

Even when given on an empty stomach, ethyl chlorid in a very small number of cases produces vomiting and nausea, but these are of the briefest duration when they do occur. Twitching and convulsive movements I have occasionally noticed during the anesthesia. Under these circumstances one must proceed cautiously in pushing the anesthesia. Of course these interfere with the finer manipulations of an elaborate operation; thus, decision of a cataract was performed with difficulty by a colleague owing to the rotary nystagmus of the eyeballs, though the anesthesia was perfect in every other respect.

A very few times the awakening has been accompanied by an excitement bordering on slight delirium, but of a very evanescent character. As a rule, it is phenomenal to witness time after time how naturally the patients come to and put questions. As for infants and children, the prompt and lusty cry after a previous profound narcosis is a source of great rejoicing to the parents, who welcome this sound with the same intense anxiety that they do the first cry of the new-born.

The pulse was always slightly accelerated with no alteration of its tension.

Very trustworthy and valuable experiments are again reported by Fritz König (loc. cit.) as to the influence of ethyl chlorid on blood pressure. He tested it on four rabbits and four monkeys, having provided for a free access of the proper amount of air by the employment of artificial respiration. His conclusions are as follows:

1. Ethyl chlorid administered with a due admixture of air effects no diminution of the arterial pressure, yet the narcosis is complete.

2. In individual instances there is a fall of blood pressure, due to vagus irritation. After section of the vagi the blood pressure rises and remains at its height throughout the narcosis.

3. When no due admixture of air is provided for, a lethal depression of the blood pressure and coincident respiratory paralysis follow. This holds good merely for the rabbit, the monkeys being far more resistant.

To effect a primary narcosis prior to the administration of ether or chloroform, ethyl chlorid is applicable in a like manner as laughing gas. It does not in the least act antagonistically or unfavorably towards accomplishing this.

As to the length of time during which it is applicable I see no reason why, if it operates well for fifteen minutes, it should not hold good for a greater length of time, in proof of which I can attest to its efficiency, having used it in an infant of 8 months for fifty minutes, the operation being for strangulated hernia; in a young lady of 18 for forty minutes in an operation for ganglia of the wrist, and in a woman of 75 for amputation of the metacarpal phalangeal articulation for tubercular arthritis, during a period of forty-five minutes. The item of expense strongly militates against its use in prolonged operations, as does also the readiness with which patients enliven and become rigid as soon as one desists in the administration because of the existing profound narcosis.

The present standpoint of ethyl chlorid narcosis may thus be summarized:

It is relatively a safe anesthetic.

Its danger point is not as readily nor as suddenly reached as in chloroform, nor does it carry with it the remoter dangers of ether.

Asphyxia when encountered is easily remedied by artificial respiration.

Proficiency in the giving of ethyl chlorid requires experience akin to that in the use of other anesthetics. The speedy onset of the anesthesia and the prompt recovery from it stamp it as ideal for ambulatory practice where it must in time usurp the preëminence of laughing gas. No physician of experience can say the least thing derogatory to the safety of laughing gas with its record of two deaths in 500,000 (?), but if you ask the physician wherefore he does not practice what is gospel in regard to laughing gas, the invariable reply is that even at its best the apparatus is too cumbersome and expensive and beyond control to estimate the quantity of gas at hand; furthermore, he will tell you the patients are always cyanotic and rigid. All these objections are at once overcome with ethyl chlorid. Surely, if every dentist is ready to use laughing gas to spare his patients pain in extraction with a minimum of unpleasant after-effects, why should not this be the attitude of the humane physician whenever he has recourse to the knife for the various acute and painful surgical affections.

In the mortality statistics given for nitrous oxid⁷ cognizance is taken of all the dental administrations. Were we also to include these, we should be able to say, not that the present mortality were 1 in 12,476 for ethyl chlorid, but 1 in 15,000 approximately. Again, the deaths from all causes to date under nitrous oxid are put down at 30 (loc. cit.); of these nearly one-half occurred within the last ten years, whereas that same number did not take place within three decades preceding. We offer this criticism not in any hostile spirit towards nitrous oxid, but merely to emphasize once more how cautious and reserved we must be in our attitude in estimating mortality statistics for a given anesthetic.

I submit these data, trusting that they will be sufficient to guide in giving ethyl chlorid a fair trial as a general anesthetic, so that it in due time may occupy a conspicuous place among the anesthetics.

⁷ *Anesthetics and Their Administration*, by Frederick W. Hewitt, p. 228, Second Edition.

To Preserve Rubber.—Ten to twelve parts of water and one part of ammonia will preserve soft rubber any length of time. Dip rubber pipes, etc., in a glass jar filled with this solution. Use for your ammonia bottle a rubber stopper; it is better than a glass stopper.—*Toledo Med. and Surg. Reporter*.

THE SUBARACHNOID INJECTION OF COCAIN. FOR OPERATIONS ON THE UPPER PART OF THE BODY.*

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SAN FRANCISCO.

The use of cocain by the subarachnoid method was demonstrated by J. Leonard Corning of New York in 1884, later by Bier, Tuffier and others. During the past year it has been tried by most of the surgeons in the country for operations below the diaphragm, and by many of them discarded on account of objections of various kinds. It has been used in a few thousand cases, but not enough to establish its safety, as compared with the general anesthetics. Its analgesic properties can not be doubted for operations in the lower extremities.

I have found that the analgesia can be extended for operations in the upper part of the body. In the transactions of the State Medical Society of California, in April, 1901, I reported eight cases where I had extended the analgesia over the entire body.

I have now used this method 673 times without a failure of analgesia, and 60 of the cases were above the diaphragm. I have only found it necessary to give a general anesthetic once after the patient had been injected, and that was in a very nervous lady that I had injected with the pretention to make an examination and then administer an anesthetic before operating; I had curetted, and opened the abdomen to remove pus tubes before she realized I was operating, then she became alarmed, and it was necessary to give a little anesthetic to quiet her, still she admitted there was no pain. The patients have varied in age from eight to eighty-six years. Many of these operations have been on patients who have been in such condition from disease, or age, that it was not considered advisable to administer a general anesthetic. The operations have extended over all parts of the body. There has been only one fatality that could in any way be attributed to its use, and that I think could hardly be attributed to it from the condition of the patient, and the postmortem findings which will be found in the histories.

The advantage of this form of analgesia can readily be appreciated by any one who has observed the appearance of a patient during the time, and after he has passed through a serious operation under a general anesthetic; it not only takes time for the patient to regain consciousness, but there is a debilitated condition brought about by the effect of the anesthetic on the blood, the shock, and often the prolonged vomiting, as well as the operation, all of which tends to weaken the vitality of the patient, and invite the many complications, which too often follow a general anesthesia.

Under cocain analgesia with the most serious operations, we observe a patient conscious, bright, cheerful, hopeful, and every faculty in perfect control, able to converse, and take food and stimulants, and even to assist the surgeon if necessary. The after-disturbances, such as prolonged vomiting, suppression of urine, and bronchitis, seldom occur.

This form of analgesia can be used where a general anesthetic is contra-indicated, on account of diseased

heart, lungs or kidneys. It can be used for operations in the localities where it is extra hazardous to administer a general anesthetic, on account of blood entering the larynx, as in excision of the tongue, or where there is danger of involving a nerve in a ligature, as the recurrent laryngeal in removal of the thyroid gland. The great advantage to be gained in using this method in operations about the buccal cavity, can hardly be appreciated until tried.

Chemically pure cocain hydrochlorate is sterilized by exposing the crystals to dry heat 300 F. for fifteen minutes, then inclose in sterile tubes, or sealed envelopes, in proper doses until time of use. The dose varies from 0.3, 0.4 or 0.5 of a grain, depending on the locality, whether in the lower extremities, trunk, or head. This is the maximum dose for a strong person; young or old persons will take a smaller dose.

I use the Lures syringe, which has a glass piston, and graduated barrel, and is readily sterilized, and always in working order. The needle is made of steel wire tubing No. 19 gauge, and three inches long; the bevel is short, with the concave portion of it dulled, to prevent cutting plug of skin and obstructing needle. The needle is kept in a saturated solution of carbonate of sodium to prevent rusting.

The patient is placed in the reclining position on either side, with body curved forward, to separate the spinous processes; the spinous process of the fourth lumbar vertebra is located by being on an imaginary line connecting the crest of the ilium. The space just between the third or fourth lumbar vertebra is frozen with ethyl chlorid, after being thoroughly cleansed. The needle is introduced just beneath the spine in the median line, with the point of it directed upward, and introduced until it meets with diminished resistance, or fluid passes. Should the needle be obstructed, it can be opened by having the patient cough, using stylet, or making suction with syringe attached, at which time a drop of cerebrospinal fluid will pass. Then place the finger over the end of the needle and connect the syringe, which has 0.3 of a grain of cocain in it, with piston closed, and gradually withdraw the piston, until the syringe is half filled with cerebrospinal fluid, which readily dissolves the cocain; then gradually return the solution into the space, by pressing the piston.

Should the analgesia be desired in the upper extremities, introduce the needle in the third space, and use the same method as above, except the dose should be 0.4 to 0.5 of a grain of cocain, and introduce as rapidly as the piston of the syringe can be pressed, then withdraw the needle and seal with collodion.

The analgesia will be complete for operations in the lower extremities in from three to five minutes, and for operations in the upper part of the body, in from fifteen to twenty-five minutes; the analgesia lasts from one to three hours, and I have seen it last five hours.

I have seldom found it necessary to repeat the injections for prolonged operations, or incomplete analgesia, but should it be necessary, I see no objection to repeating the dose.

The action of such a small amount of cocain to produce profound analgesia has caused considerable discussion. I am of the opinion that it acts locally by coming directly in contact with the roots of the nerves, and it has a special affinity on the fibers which carry the sensation of pain.

The patient will occasionally complain of cramps in the limbs, or a warm sensation over the entire body, rapid pulse, perspiring, nausea, vomiting, involuntary

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evacuation of the bowels during the early part of the analgesia, headache and chills after it. The vomiting occurs in about every eighth case, and usually comes on in about ten or fifteen minutes after the injection, and lasts only a few minutes; it is very seldom that it occurs after the operation. We often have a rapid pulse during the operation, especially if the patient is excited or nauseated. The rapid pulse is generally associated with the nausea, but there is sometimes a condition of depression which is evidently a form of shock due to some disturbance of the centers brought about by the injection, but I have never seen it very alarming, except in one case where I withdrew considerable cerebrospinal fluid for analysis.¹ The much dreaded headache will seldom if ever occur if the cocain is dissolved in the fluid, and none of the cerebrospinal fluid wasted. In dissolving the cocain in the cerebrospinal fluid, we not only disturb the parts less by placing a less amount of foreign element in the canal, but the fluid is kept at the same temperature, and is not in any way disturbed by diminishing or increasing the amount of fluid in the cerebrospinal space. If this is carried out you will seldom find headache. I have observed nine chills during the first few days after the operation; in some of them I was unable to find any cause for the disturbance, except it be this method of analgesia; there was no serious condition as a result.

Among the following operations many of the patients had two or more operations, only the most important one is mentioned.

Abdominal sections.....	63
Herniotomy for inguinal hernia.....	79
Herniotomy for umbilical hernia.....	2
Hysterectomy.....	2
Operations for fractures, lower extremities.....	34
Operations for relief of flatfoot.....	1
Suturing fractured patella.....	2
Amputation of breast.....	2
Suprapubic cystotomy.....	4
Internal urethrotomy.....	6
External urethrotomy.....	11
Repair of injury to muscles of arm.....	2
Operation for relief of enlarged prostate.....	3
Operation for hydrocele.....	10
Operation for varicocele.....	19
Circumcision.....	16
Plastic for contracture of hand.....	1
Lengthening of tendons for contractures.....	11
Stretching sciatic nerve.....	5
Operations for osteomyelitis.....	5
Operations for anal fistula.....	29
Removal of hemorrhoids.....	38
Gynecological operations.....	19
Excision varicose veins of legs.....	37
Incision cellulitis.....	28
Orchidotomy.....	7
Resection ribs.....	3
Amputation of leg, foot and toes.....	18
Vasectomy.....	2
Skin grafting.....	43
Bone grafting.....	5
Excision of tumors.....	16
Abscess ischiorectal.....	11
Retained testicle.....	2
Parturition.....	12
Removing sequestrum.....	20
Canterlizing back.....	2
Incision of knee joint.....	3
Wiring or setting fractured bones of arm.....	4
Examination fractures.....	4
Excision carcinoma back.....	5
Psoas abscess.....	4
Resection hip joint.....	3
Vaginal fixation uterus.....	4
Segregation urine.....	4
Amputation of penis.....	1
Amputation of hip joint.....	2
Abscess liver.....	2
Scrotal abscess.....	4
Cystoscope examination.....	3
Reducing dislocation femur.....	3
Reducing shoulder dislocation.....	2
Excision carcinoma rectum.....	1
Amputation arm and fingers.....	5
Excision tongue.....	4
Infraorbital neuralgia.....	1
Excision inferior maxillary.....	3
Excision superior maxillary.....	1
Thyroidectomy.....	2
Separating sterno mastoid.....	1
Tumor face.....	7
Trephining skull.....	1

Trephining antrum of superior maxillary.....	2
Trephining mastoid abscess.....	2
Tonsillotomy for carcinoma.....	1
Plastic on face.....	12
Enucleation of eye.....	4
Excision tubercular glands.....	8

Total.....673

CASE 1.—Mr. J. K., aged 39. Fracture of olecranon. Injected 0.4 cocain between the first and second lumbar vertebræ; analgesia complete in five minutes; pulse varied from 86 to 104; respiration 19 to 28; involuntary passage during the operation. Made an incision and wired the olecranon. During the operation the patient would grit his teeth, but expressed himself as free from pain.

CASE 2.—Mr. Wm. D. C., aged 55. Tumor of arm. Injected 0.4 gr. cocain into third lumbar space with force; analgesia complete to arms in five minutes; pulse varied from 90 to 100; resp. normal. Muscular tumor removed from arm.

CASE 3.—Mr. D. C., aged 67. Empyema of right side. Injected 0.4 gr. cocain into third space with force; analgesia complete to the axillary space in three minutes. Three ribs resected. Pulse varied from 98 to 114; resp. 20 to 24. Otherwise normal; some nausea.

CASE 4.—A. W. S., aged 49. Phlegmon of right hand. Injected 0.4 cocain into the second lumbar space, with much force; analgesia complete over the entire body in ten minutes; pulse varied from 80 to 94 after injection, 108 before injection from nervous excitement. Free incision in the palm and dorsal surface of hand; patient vomited.

CASE 5.—Mr. L., aged 60. Carcinoma sacrum and lower lip. Injected 0.4 gr. cocain into third lumbar space with force; analgesia complete over entire body in three minutes; pulse before injection 108, varied from 108 to 118, respiration normal. Carcinoma removed from sacrum and lower lip; operation lasted one hour and a half.

CASE 6.—Mr. J. B., aged 72. Chronic ulcer of leg and carcinoma on neck between shoulders. Injected 0.4 gr. cocain into third space with force; pulse varied from 75 to 94, resp. 13 to 20; no nausea or vomiting. Operation performed on back half an hour after injection.

CASE 7.—Mr. A. G., aged 41. Muscles torn from inner condyle of left arm. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in five minutes; pulse varied from 80 to 114. Party was drunk and complained some during the operation, but seemed to be analgesic.

CASE 8.—Mr. F. O., aged 24. Tubercular glands of neck. Injected 0.4 gr. cocain into third lumbar space with force; pulse and respiration remained normal. Removed glands. Patient complained a little from pressure of retractors; pulse and respiration normal.

CASE 9.—Mr. R. K., aged 15. Mastoid abscess. Injected 0.4 gr. cocain into third lumbar space, then removed to ward, and was operated on by Dr. Payne. Mastoid opened free of pain; pulse and respiration normal. Two hours after operation boy was found walking in the ward with other patients, as though nothing had happened.

CASE 10.—Mr. A. L., aged 53. Abscess antrum, superior maxillary bone, left side, also general atheroma. Pulse before injection 92, respiration 20. Injected 0.4 gr. cocain into third lumbar space; after waiting twenty minutes, analgesia not complete about the face, then injected 0.1 gr. more; analgesia perfect as soon as injection was completed. Opened left antrum superior maxillary. Pulse varied from 80 to 110, respiration normal; slight vomiting ten minutes after injection.

CASE 11.—Mr. F. O. N., aged 43. Epithelioma of lower lip. Injected 0.5 gr. cocain into third space with force; analgesia complete in fifteen minutes; slight emesis thirty minutes after injection; pulse varied from 87 to 110; respiration normal. The entire lower lip removed, also glands of the neck, and lip was restored by plastic operation. Operation lasted two hours.

CASE 12.—Mr. J. G., aged 47. Fracture of seventh rib and perforation of lung. Injected 0.4 gr. cocain into third lumbar space, elevated and resected the ends of the ribs. Free from pain. Pulse varied from 100 to 110; respiration normal. Patient vomited after injection.

CASE 13.—Mr. H., aged 36. Gangrene of large toe and sebaceous cyst of scalp, size of hen's egg. Injected 0.5 gr. cocain into third space with force, analgesia complete, pulse and respiration normal. Toe was amputated three minutes after injection, and thirty minutes later cyst was removed.

CASE 14.—Mr. W. L., aged 42. Phlegmon of hand. Injected 0.5 gr. cocain into third lumbar space; analgesia complete in three minutes; pulse before injection 102, during operation it varied from 70 to 120, respiration 24 to 26.

CASE 15.—Mr. D. C. Empyema of left side. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in three minutes. Resected a part of three ribs. Pulse before injection 98, and during operation 98 to 116; respiration 20 to 24. Patient was slightly nauseated.

CASE 16.—Mr. J. McD., aged 51. Carcinoma of both tonsils and soft palate. Injected 0.5 gr. cocain into third lumbar space with force; analgesia complete in ten minutes. Made free incision of each side of neck, and on the right side removed tonsil through the incision; the other tonsil and soft palate was removed, then cauterized the posterior space. Pulse varied from 80 to 100; respiration 20 to 24; analgesia was profound.

CASE 17.—Mr. M. J., aged 64. Carcinoma of lower eyelid and eye. Injected 0.5 gr. cocain into third lumbar space with force; analgesia over body in twenty-five minutes; patient complained a little at first incision, but did not flinch as the optic nerve was separated; slightly nauseated; pulse and respiration remained normal; operation performed by Dr. Dameron.

CASE 8.—Mr. K., aged 78. Carcinoma involving the upper eyelid; patient very feeble for years. Injected 0.5 gr. cocain into third space; analgesia complete in twenty minutes. Dr. Powell removed the upper lid and restored the parts by a plastic operation, and during the same time I removed a large lipoma from the left thigh. Patient talked and had no unpleasant symptoms; pulse dropped to 50, but soon returned to 65, which was normal.

CASE 19.—Mr. M., aged 54. Dislocation left shoulder. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in fifteen minutes. Reduced dislocation; pulse and respiration remained normal.

CASE 20.—Mrs. H., aged 83. Carcinoma of left eye, patient very feeble. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in twenty-five minutes; pulse varied from 70 to 100; respiration, 20 to 24; patient vomited before operation commenced. Dr. Payne enucleated the eye and performed a plastic operation on lower lid.

CASE 21.—Mr. E., aged 36. Mastoiditis. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in thirty minutes; patient nauseated; pulse varied from 72 to 104; respiration 20 to 22. Mastoid opened and curetted.

CASE 22.—Mr. Mc, aged 30. Sarcoma of tongue. Injected 0.5 gr. cocain into third space; analgesia complete in twenty-five minutes; patient struggled a little at first, as blood passed into the back part of the mouth, but after the blood was removed patient kept quiet. The tongue was removed through the mouth, and there was considerable hemorrhage. Pulse before operation 100, during the operation pulse was 130, but remained about 110; respiration from 20 to 26. Later the growth returned on the base of the tongue and tonsil. Injected 0.5 gr. cocain; analgesia complete in twenty-five minutes. The glands were removed from each side of the neck, parotid, submaxillary, both tonsils and base of the tongue. The pulse before operation was 104, during operation pulse varied from 112 to 140; respiration 22 to 26. The operation lasted two hours, during which time the man showed no signs of pain. At close of operation the man thanked the operator, Dr. Kenyon, by nodding; the patient was up in a few days, but the growth soon returned.

CASE 23.—Mrs. E. Carcinoma of breast, and very feeble with mitral regurgitation. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in ten minutes; patient vomited; pulse rate varied from 90 to 115, and very feeble during operation. Used hypodermic stimulations. The breast was removed without pain.

CASE 24.—Mr. P. C. R., aged 45. Infraorbital neuralgia, of a severe type. Injected 0.4 gr. cocain into third lumbar space, the entire body analgesic in twenty minutes; pulse and respiration remained normal. The patient found only temporary relief.

CASE 25.—Mr. A. M., aged 43. Osteoma in the orbital cavity, which caused the eyeball to bulge. Injected 0.5 gr. cocain into third lumbar space; analgesia complete in twenty minutes. Free incision made above the eye through the upper lid; the eyeball was pushed downward and forward and growth removed. Everything remained normal, and the patient constantly expressed himself as feeling all right. Operation by Dr. Schloss.

CASE 26.—Miss C. C., aged 16. Deflected septum and exostosis. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in twenty minutes; patient vomited, pulse rate varied from 80 to 100, respiration 20 to 22. Patient complained a little of pain during the operation. Operation by Dr. Schloss.

CASE 27.—Mr. B., aged 48. Injury to hand, fingers of hand in complete extension. Injected 0.5 gr. cocain into third lumbar space; analgesia complete in fifteen minutes; pulse varied from 72 to 102; respiration normal. The extensor tendons were cut and ankylosis broken down. Patient vomited before operation.

CASE 28.—Mr. H. A., aged 58. Injury to left arm. Injected 0.4 cocain into third lumbar space; analgesia complete in seven minutes. Muscles stitched and parts grafted. Pulse and respiration remained normal.

CASE 29.—Mr. W. H., aged 48. Carcinoma of lower lip. Injected 0.5 gr. of cocain into third lumbar space; analgesia complete in twenty minutes. Removed the lower lip and restored the parts by a plastic operation. Pulse before injection 104, varied during operation from 104 to 119; respiration 20 to 24.

CASE 30.—Mr. A. L., aged 52 years. Carcinoma superior maxillary bone of left side. Injected 0.4 of cocain in third lumbar space, and at the end of twenty minutes did not show profound analgesia. Injected 0.2 gr. more into third lumbar space; analgesia immediately after second injection. Removed the left superior maxillary bone and alveolar border of right side. Pulse varied from 70 to 100; respiration 20 to 24; patient nauseated; gave hypodermic strychnin during operation. Recovery was uninterrupted. Patient died eight months later.

CASE 31.—Mr. F. C., aged 42. Epithelioma of lip. Injected 0.4 gr. cocain into third lumbar space, with force; analgesia complete in twenty-five minutes; pulse varied from 76 to 104; respiration 20 to 23; vomited. Removed the glands from the neck and the whole side of the lower lip, which was restored by plastic operation.

CASE 32.—Mr. J. W. H., aged 26. Carcinoma of left breast. Injected 0.5 gr. cocain into third lumbar space; analgesia complete in twenty-five minutes; pulse varied from 78 to 98; respiration 20 to 25. Removed the breast and axillary glands.

CASE 33.—Mr. A., aged 51. Empyema of antrum left side. Injected 0.4 gr. cocain into third lumbar space, with force; analgesia complete in twenty minutes. Opened and drained antrum of superior maxillary. Pulse and respiration remained about normal.

CASE 34.—Mr. J. B., aged 52. Carcinoma of tongue, tonsils and glands of the neck; the base of the mouth had broken through, and the tongue was so much enlarged that the patient could not swallow. Injected 0.5 gr. cocain into third lumbar space, with force; analgesia complete in twenty-five minutes; pulse varied from 112 to 120; respiration 22 to 26. Removed the tongue through the base of the mouth, and opened the neck and drained. After the operation patient was fed with stomach tube. Died ten days after the operation, from his emaciated condition.

CASE 35.—Mr. F. H., aged 31. Ununited fracture of right humerus. Injected 0.5 gr. cocain into third lumbar space; analgesia complete in twenty minutes; pulse varied from 80 to 124; respiration 20 to 27. Wired the bones.

CASE 36.—Mr. J. D., aged 53. Carcinoma of tonsils and inferior maxillary of right side. Injected 0.5 gr. cocain into third lumbar space; patient vomited before operation; analgesia complete in fifteen minutes. Removed one-third of the inferior maxillary bone, both tonsils, glands of the neck, and cauterized the posterior nasal space with a Paquelin cautery. Pulse varied from 100 to 128, being the highest while working in the deep structures of the neck. Respiration 18 to 28.

CASE 37.—Mr. J. B. M., aged 63. Carcinoma of right inferior maxillary and tonsil. Injected 0.5 gr. cocain into third lumbar space; analgesia complete in twenty minutes. Removed part of the inferior maxillary bone, both tonsils, and glands of the neck. Patient walked to carriage, and rode home some two hours after operation.

CASE 38.—Miss S., aged 27. Exophthalmic goiter, size of hen's egg, with very rapid pulse, and a general weakened condition of the system. Pulse before operation varied from 120 to 130, respiration 22 to 26. Injected 0.5 gr. cocain into third lumbar space, with force; analgesia complete in twenty-five minutes. Removed right gland through a curved incision. During operation I made certain not to include the recurrent laryngeal nerve in my ligature, by noticing the condition of the voice. The patient complained a little from tension, so that it was necessary to administer a little alcohol on the mask, which quieted her, as she thought we were administering chloroform. The operation lasted one hour, and patient made a rapid recovery.

CASE 39.—Mr. J. D., aged 52. Carcinoma of neck. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in twenty minutes. Removed glands of the neck. Pulse varied from 72 to 100; patient vomited.

CASE 40.—Mr. M., aged 52. Trephining frontal antrum. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in twenty-five minutes. Frontal antrum trephined. Patient complained very little; no vomiting or nausea.

CASE 41.—Mr. C., aged 63. Carcinoma of the tongue. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in seven minutes. Removed the tongue and glands of the neck. The operation lasted two hours, no vomiting or any bad after-effects. Pulse varied from 72 to 104. In twenty-five minutes after operation started patient complained a little, but very little after first incision.

CASE 42.—Mr. W., aged 33 years. Subclavian aneurism, with paralysis of left arm. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in twenty minutes. Amputated arm at shoulder joint. Patient made a rapid recovery.

CASE 43.—Mr. T. B., aged 72. Carcinoma on back. Injected 0.3 gr. cocain into third lumbar space; analgesia complete in twenty-five minutes. Carcinoma removed.

CASE 44.—Mr. A., aged 42. Trephined antrum of superior maxillary. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in twenty minutes; pulse varied from 70 to 80; little nausea. Trephined antrum.

CASE 45.—Mr. W., aged 52. Trephining depressed fracture. Injected 0.4 gr. cocain into third lumbar space; analgesia complete in fifteen minutes. Opened scalp over right side, and elevated a depressed fracture, size of silver dollar. Patient was nauseated.

CASE 46.—Spanish boot-black, aged 24. Fibroma of superior maxillary. Injected 0.5 gr. cocain into third lumbar space; analgesia complete in twenty-five minutes. Patient was frightened and complained a little as incision was made in skin, otherwise little evidence of pain.

CASE 47.—Mr. —, aged 7. Contracted sterno-mastoid; was severed twenty minutes after injecting 0.3 gr. cocain into third lumbar space.

CASE 48.—Mrs. B., Swedish, aged 54 years. Height 5 feet 1 inch, general weight 348 pounds. Had recently reduced weight by dieting to 318 pounds. Alcoholic subject, with a rheumatic history, and a pendulous abdomen, which was hanging over half way to the knees, in which was a constricted umbilical hernia. The heart sounds were very weak, with a mitral murmur, and pulse rate 120. There were symptoms of strangulation, and I was unable to reduce the hernia. The patient had been unable to take the reclining position for sev-

eral days on account of her heart affection, and was in nearly a semi-comatose condition at the time of injection, from the strangulation. After consultation it was decided unwise to administer an anesthetic. Injected 15 m. of 2 per cent. solution of cocain into fourth lumbar space, made two oval incisions connecting on each side of the abdomen and removed 14 pounds of the pendulous abdomen, and then liberated and reduced the hernia, at which time she expired. The post-mortem was made in less than one hour after death. Pericardium was completely distended, 200 c.c. clear fluid; the heart cavities greatly distended by fluid blood; the heart was very much enlarged, and light in color; posterior segment of the tricuspid adherent to the wall of the ventricle, chordæ tendinæ contracted, forming fibrous tissue, which extended into the ventricles, showing evidence of old ulceration; mitral segment adherent to ventricle, through chordæ tendinæ, and filled with calcareous deposits in the margins. Atheroma of aorta. 615 Parrott Building.

DISCUSSION

ON PAPERS OF DRS. WARE AND MORTON.

DR. DANIEL N. EISENDRATH, Chicago—When ethyl bromid and ethyl chlorid were first brought out they were given in too concentrated a form and were then dropped. The apparatus of Dr. Ware seems to solve the question and makes the anesthetic less dangerous. It is a good anesthetic for dispensary practice and German surgeons have used it a great deal for small operations. They have been very successful, the mortality being very small. This form of general anesthesia is better than the nitrous oxid, which has to be given very carefully to elderly patients, as the sudden increase of arterial pressure is likely to lead to serious results.

There is an element of medullary anesthesia which we are apt to forget and that is mental shock. I operated on a patient 80 years old, a week ago, but on account of his atheromatous heart I hesitated to give either ether or chloroform, and performed a laparotomy under local anesthesia. The cut through the skin gave very little pain. There was some rigidity of the abdominal muscles. From the moment I got into the abdominal cavity the element of mental shock played a great rôle. He could scarcely ever feel that I was touching the stomach, but the consciousness of a major operation being performed seemed to distress him very much. I am inclined to believe that this does more harm than even the general anesthetic would.

DR. C. E. THOMSON, Scranton—I think this is an appropriate time to report that in the institution with which I am connected we have lost two cases from chloroform anesthesia this year. Both cases were fractures of the lower jaw. In the first case the anesthetic was being given for a simple operation. Not more than a dram of chloroform had been used, when the patients suddenly stopped breathing and died. Since I left home this week, in a letter received last evening, my associate reports a second death from chloroform used in reducing a double fracture of the lower jaw. In this case he gave the anesthetic himself and the patient took but a few drops when he stopped breathing. The doctor did a tracheotomy and the patient gasped a few times and then died. I want to report these cases, which are to me interesting, as proving in this connection that local anesthetics are safer. We have used chloroform for fifteen years without a death, except the above.

DR. D. F. MONASH, Chicago—It is evident that ethyl chlorid as a general anesthetic must have a limited range of application, as it is employed only in minor operations of brief duration. Next to nitrous oxid gas it appears to be the safest and most rapid anesthetic we possess, and enjoys the advantage of a full return to consciousness immediately on the removal of the drug and produces no disagreeable after-effects. In the large experience of the essayist, chlorid of ethyl has proven a safe and practical anesthetic. The rapid induction of anesthesia, the speedy return to consciousness without apparent effect on pulse or respiration, without cyanosis, vertigo or nausea, and the simplicity of administration should popularize its use. For these reasons ethyl chlorid may have a field of special usefulness as a dispensary and office anesthetic. The discovery of the general anesthetic effect of ethyl chlorid, it is said, was

made by a dentist who, in spraying it on a patient's gums, noticed the constitutional effect produced by its inhalation.

DR. W. D. HAINES, Cincinnati—I have long held that death from chloroform is occasionally due to the irritating influence of the fluid on the faucial mucous membrane of the patient. The administration of chloroform is frequently intrusted to a student who has had little or no experience in giving the drug and who, through lack of attention or knowledge, drops the chloroform on the mask too rapidly and the liquid begins to run over the patient's face; if the mouth be open some of the fluid may readily find its way to the throat of the patient, who ceases to breathe at once and defies all attempts at resuscitation. I drew this conclusion from my experience in sudden deaths from carbolic acid. Many of these cases die instantly just as do the chloroform cases, long before the physiologic effect of either drug could become operative. Therefore, I submit that death in such instances is not due to chloroform narcosis on the one hand or carbolic acid poisoning on the other, but is due to inhibition. The tendency of any irritant to the faucial mucous membrane is toward inhibition, from its influence on the filaments of the vagus which are so freely distributed to these parts. Hence it is well for the surgeon, when operating on these parts, applying caustics to them or in the administration of chloroform to remember the neck as one of the "privileged regions."

DR. R. C. CORFEX, Portland Ore.—I believe much more importance should be attached to the anesthetist than to the anesthetic. We have stopped having students anesthetize for us, and instead we have a salaried man, whom we consider a man of equal judgment and mental ability with the operator. The trouble in anesthesia is in the man who is giving it. Since we have commenced the employing of an experienced anesthetist, we have entirely forgotten the phrase, "This patient takes the anesthetic very badly." When we were employing inexperienced doctors or medical students, we were frequently stopped in the operation to use artificial respiration or to in some other way help the anesthetist. The point of importance in the giving of an anesthetic is for the anesthetist to know exactly "where his patient is." There are many minor points in the facial expression, in the circulation, in the eyes, which are of vital importance and tell the experienced anesthetist when his patient is getting on dangerous ground. An inexperienced anesthetist (and I mean in this class the man who never learns the meaning of small symptoms, even though he has had years of experience) can not tell the difference between the rapid heart, due to excitement, in the spasmodic stage, and the heart which is flagging from paralysis. Frequently we find this kind of an anesthetist using artificial respiration while the patient is still talking. In the small towns and country districts it is a very frequent thing for us to hear of several men in the neighborhood who have such strong constitutions that Dr. — could not get them under the anesthetic at all. I think if there is a burning shame resting on surgeons to-day it is that they allow inexperienced physicians and medical students to do anesthesia, when it is in reality but little less important than the operation itself. If patients only knew the great danger they are in when they believe "that anyone can give the anesthetic," they would certainly be willing to pay any price for a man who has learned by study and experience the symptoms which indicate the position the patient occupies at all the stages of the operation as regards the anesthetic. As to the choice of general anesthetics, I think there is very little. The man who is accustomed to give chloroform will give chloroform with as much safety as the one who is accustomed to giving ether will give that anesthetic. Our anesthetist uses ether and by his method gets the patient under the anesthetic in from three to five minutes. During the past seven months, he has given for us more than four hundred anesthetics, and so far as I know the operator has not once been asked or found it necessary to stop his operating to look after the condition of his patient because of the anesthetic.

DR. WARE, in closing—I think I have embodied all I have to say in my paper. It being a new subject, I hardly looked for extensive discussion. Like everything new it has to be tried first. I thought after I had given this anesthetic in 1,000 cases I was entitled to give my experience. I had always been

a great admirer of laughing gas, having given it as many as 5,000 times or more without fatality. While demonstrating to a colleague who was anxious to see the method of its use, we gave a patient laughing gas and to my great surprise he narrowly escaped death. Anyone will meet with a death occasionally with every anesthetic, and herein we must consider the personal equation of the anesthetizer. If you want an anesthetic that will be free from any mortality I think you are certainly looking for an unknown quantity. With these phenomena of threatening death that occur so suddenly I have had the experience repeatedly that carefully executed artificial respiration instead of tracheotomy is the proper procedure. Dr. Crile has shown what a rôle the pneumogastric and its branches play in operative work about the neck. To eliminate these baneful influences wrongly attributed to chloroform, he blocks out reflexes by application of cocaine to the pneumogastric and its branches as exposed.

DR. MORTON, in closing—The one great objection to this form of analgesia is that the patient remains perfectly conscious during the operation, which might interfere with a nervous person; this is perfectly true as we have been educated to believe that it is necessary to be unconscious during the performance of a capital operation. In some of those cases it will require a little tact and suggestion on the part of the surgeon to distract the patient's mind from the operation, and it may be necessary before performing the operation to blindfold the patient, and should you not wish him to understand what you are saying close his ears with cotton. By using this method of injecting the cocaine directly into the cerebrospinal fluid, you will never have a failure of analgesia, as it is necessary to get the needle into proper space before you can dissolve the cocaine. The crystals of cocaine are readily sterilized by exposing to dry heat at a temperature of 300 F. for fifteen minutes, and they will keep indefinitely, and are always ready for use. The solution of cocaine is very difficult to sterilize without boiling, and the analgesic properties will not stand boiling. It will soon become old and form products which are poisonous. This method of analgesia places less foreign matter in the subarachnoid space, which naturally makes less disturbance.

SYPHILIS OF THE LIVER.*

CHARLES G. STOCKTON, M.D.

BUFFALO.

Two notable contributions on the morbid anatomy of hepatic syphilis, the one by Adami¹ the other by Flexner,² render superfluous any review which I might make of this part of the question. Although the chief pathologic changes induced by syphilis of the liver appear to have been carefully studied and classified, the clinician occasionally meets with instances of undoubted syphilis in which there develop hepatic manifestations that so puzzle him as to the precise character of the morbid change that classification has to be abandoned. There is abundant literature of the classical expressions of the disease with which all recognized students substantially agree, and there are to be found many scattered reports of individual cases that are sufficiently rare to warrant description; but these are so commonly benefited by treatment that they either escape autopsy altogether or else are delayed until the specific effects of mercury or iodid have helped to conceal the exact steps of the morbid process. It is apparent that there is no fundamental difference between the pathology of congenital syphilis and that of the acquired disease. In either one we may have first: the diffuse hepatitis or parenchymatous degeneration to be succeeded by the ingrowth of fibroid tissue; these changes are probably due to the local

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2. New York Med. Jour., Jan. 18, 1902.

effect of the specific toxin rather than to local infection. Second, we have gummata occurring in large tumors, in scattered masses, in miliary granulomata, or in the budding stage, as mere aggregations of lymphoid cells; these lesions appear to be the outcome of stimulation of tissue from the local action of micro-organisms rather than intoxication. In some instances the liver is apparently invaded chiefly through the lymphatic system, not infrequently by the route of the peritoneal cavity, in which case the liver is often attacked at the periphery; and still other cases in which the disease manifests itself especially in the blood vessels, producing the most striking symptoms by obstructing some branches of the hepatic veins, as pointed out by Fagge; or by the obliteration of some of the portal branches or distribution of the hepatic artery.

Among the clinical manifestations excited by the changed structure of the organ (not overlooking the constitutional effects of the accompanying toxemia) are, first, increased bulk of the liver; second, deformity of its contour; third, roughening of the adhesions to its surfaces; fourth, obstruction of the bile passages, causing jaundice; fifth, obstruction of the blood passages, causing ascites; sixth, perihepatitis, causing friction, pain, tenderness and sometimes contraction of the liver; seventh, and rarely, an extraordinary enlargement of the liver, sometimes accompanied by perihepatitis, slight effusion, pain and tenderness, apparently the result of lymphatic obstruction. Disturbances in nutrition leading to emaciation and glycosuria is not uncommon, and almost invariably there is some albuminuria with presence of tube casts. In addition to these is the cachexia of syphilis, which belong no more to syphilis of the liver than to that of the other organs of the body.

The most mysterious changes of the liver that have come under my personal observation have been in a few rare cases of syphilitic disease expending its force for the most part on the lymphatic system. I do not refer to the ordinary cases of perihepatitis, with pain, friction, moderate increase in hepatic bulk, perhaps to be followed by contraction, and not infrequently extending along the capsule of Glisson and invading deeper structure of the organ. Such cases are sufficiently familiar. I refer rather to a class of cases, one of which I saw years ago when a hospital interne, in which there had been evidence of serious involvement of the deep abdominal lymphatics. There was a low-grade peritonitis, and probably the disease was at the same time active in the retro-peritoneal lymph nodes. Throughout the abdomen, widely diffused, could be distinctly felt resisting masses tender to the touch. There were also apparently periphepatitis and a slight accumulation of ascitic fluid. The liver already enlarged, extending slightly below the free border of the ribs, somewhat suddenly began increasing in bulk and, within a fortnight, had reached a point midway between the umbilicus and the pubis. Its border was smooth, rounded, without any irregularities, and was tender on pressure. This was the largest liver which has come under my observation. Under treatment by potassium iodid in large doses and inunctions with mercurial ointment, improvement rapidly occurred and within a month the liver had returned almost to its normal size and the patient was restored to a reasonable state of health. There was no jaundice, but, as stated, moderate ascites; this, however, probably depended on the accompanying peritoneal lymphatic involvement rather than on the liver. The digestion was disturbed, the patient suffered from pain and there was considerable elevation of temperature. I have never been able satisfac-

torily to account for this process—the sudden and very great enlargement of the liver and its subsequent restoration by specific treatment within an incredibly short time is something that has never been sufficiently explained, so far as I know, by the pathologist.

I have since had the opportunity of studying an almost identical case. This condition does not seem like the pericellular cirrhosis with parenchymatous degeneration, resulting from the intoxication (either of infections or poisons) such as has been described by Aufrecht, for the reason that under treatment the liver rather promptly returns to a state of reasonable competency. Taking into consideration the fact that the lymphatic system was in both these cases markedly involved, and recalling that the lymph glands when thus affected show infiltration with round cells, it has seemed to me probable that a similar process was taking place in the intercellular and interlobular lymph spaces of the liver. Be the cause what it may, the hepatic enlargement seems to be unquestionably purely specific. Besides the increase in bulk there was pain and tenderness, at times very severe, not only in the region of the liver, but in other parts of the abdomen. In congenital syphilis it is known that the liver occasionally reaches a great size, a change that has been shown to depend on pericellular cirrhosis associated with parenchymatous degeneration, but in these instances death usually results within a few weeks. Because of the presence of pain and tenderness the question of perihepatitis naturally arises. It is highly probable that there was perihepatitis present, although a friction was at no time heard; but the case was quite unlike the ordinary instances of syphilitic perihepatitis with only moderate increase in the size of the liver, with friction sound and pain appearing on slight movement. Nor is it like those cases involving the capsule of Glisson, usually associated with the formation of gummata in which dense bands of fibrous structure extend through the organ and, on contraction, leave it deformed by prominent ridges and deep depressions. Such a case came recently under my observation. The man was 36 years old and had acquired syphilis eighteen years before. He had lost thirty-two pounds in weight within a few months; his skin was subicteric, pigmented and harsh; his blood vessels were sclerotic with the resulting changes in the heart and kidneys. There was neither ascites nor distinct jaundice. Chains of slightly enlarged lymph glands could be found. The liver was two inches below the free border of the ribs and deep lines with intervening prominences in the liver could be most readily felt on palpation. This patient is at present improving on mercurial inunctions. It is altogether probable that we have here to deal with a case in which gummata have formed and radiating from these through the liver and appearing on its surface and involving its capsule are dense bands of fibrous tissue.

We usually find moderate enlargement of the liver in diffuse syphilitic hepatitis. It is a condition generally accompanied by a wide symptomatology and sometimes baffles treatment. Nevertheless, when the parenchyma has not undergone too much degeneration, radical measures will often accomplish wonders. I report the following case in illustration of the foregoing statements, and especially because of the question of diagnosis.

CASE 1.—C. E. B., aged 45, American, single, bar tender, entered Buffalo General Hospital, Jan. 30, 1901, complaining of sore throat, pain, swelling of right wrist, cough, expectoration, dyspnea on exertion, and digestive disturbance.

Family History—Father died at 74, mother at 84; two brothers and two sisters alive and well; one brother was killed in Civil War, and one died from tuberculosis.

Personal History—Patient had suffered from several diseases of childhood, including scarlet fever, and had had several attacks of rheumatism, the first of which occurred five years ago. He had influenza twice. At sixteen years of age he acquired syphilis for which he was treated for a period of two years. He stated that the present trouble began a week before entrance. He had apparently taken cold and suffered from a pharyngitis and tracheo-bronchitis. The patient weighed 250 pounds and was about five feet ten inches high. His tissues were flabby, muscles poorly developed. The right wrist was somewhat swollen and painful. The skin was muddy, icteric, and there was acne rosacea on the face. The temperature was normal, pulse 90, rather quick, small, but of good tension. The heart was slightly enlarged, the first sound at the apex weak, although the aortic second was over accentuated. The abdomen was very fat and was further distended by ascitic fluid, and the large liver, which extended two inches below the free border of the ribs. January 31, the urine was very dark, 1030 specific gravity, highly acid, containing bile-pigment, a trace of albumin, but no sugar. There were a few bile-stained hyalin casts, renal epithelial cells and leucocytes. February 1, he was found to pass 500 c.c. of urine in 24 hours, containing 34.9 grams of solids, 17.5 grams of urea, considerable indican, and some bile-stained, coarsely-granular casts.

Treatment—The volume of the liver steadily increased and also the ascites, although the man was given purgatives, diuretics, vapor baths and circulatory stimulants. He was given one gram of potassium iodid three times a day with 30 gm. of pil. hydrarg. at night, followed by sodium sulphate in the morning. Ung. hydrarg. was applied to the painful joints. He improved in his symptoms with the exception of the ascites and the liver, which apparently grew worse. The fluid steadily increased, and toward the end of February, the liver extended from the nipple to the umbilicus, a distance of about ten inches. The general condition of the patient was better. March 5, the abdomen was tapped, and 3000 c.c. of bile-stained fluid withdrawn. The iodid was increased and inunctions of mercury applied systematically. With the application of the latter the man began to improve. The ascitic fluid did not reaccumulate and the liver decreased in size.

Results—The patient was discharged April 17 feeling very well. The lower border of the liver was at the free border of the ribs; it extended upwards to the nipple; it was still large, but the jaundice had disappeared and the man had largely regained his strength. At this date, fourteen months after his discharge, the patient has continued improving. The treatment has been continued at intervals.

By a singular coincidence I had in my wards at the same time another case almost the identical counterpart of this in every way. The ascites was so great that he was frequently tapped, but he was ultimately so far restored that he left the hospital hoping to be able to earn his living.

It is not uncommon to find evidence of a single large gumma, often so superficial that it can be made out by palpation, and frequently accompanied by localized perihepatitis. These cases are often mistaken for malignancy, and as the diagnosis is somewhat difficult it may be worth while to report the following illustrative case:

CASE 2—William K., American, aged 28, hotel clerk. Entered Buffalo General Hospital, Sept. 13, 1900. Complained of fever, weakness and pain in the right hypochondrium.

Family History—Mother died at 52 of inflammation of the bowels; father at 65 from an unknown cause. Two sisters and one brother were alive and well. The patient had had but one child born, apparently healthy, but when seven days old began to have hemorrhages from the penis, which recurred frequently for five days until the child died.

Personal History—The patient acknowledged having had a urethral discharge about ten years ago from which he says

he recovered after two weeks' treatment. He denied syphilis positively; no scar could be found; he had used alcohol moderately. The history was otherwise unimportant. The present illness began about two years ago, when the patient complained of pain under the free border of the right ribs which continued for about two months. He then improved, and believed himself to be in good condition until May, 1900, when the pain returned in the same region, extending into the lower thoracic region of the right side. All treatment failed and he steadily grew worse. He formerly weighed 158, but on entrance to the hospital weighed 120 pounds only. He complained of night sweats, loss of appetite, gastric distress after eating, insomnia and great weakness. He had no chills although there was a rise of temperature. Bowels were usually constipated, but were relieved by purgatives. A study of the temperature showed that without any regularity it ranged from 96.5 to 101 degrees F., and the pulse varied from 70 to 100, corresponding in its variation with the temperature. When awake the respirations were uniformly at 20.

Examination—The physical examination showed that the thorax was negative. There was no abdominal distension, save slight fulness in the right hypochondrium. The area of hepatic dulness was of most interest, extending from the fifth rib to a point slightly above the transverse umbilical line. Palpation confirmed the belief that this was owing to enlargement of the liver, which increase was limited to the right lobe. The lower border of this could be made out as a rounded and comparatively smooth mass, not tender to pressure, apparently non-adherent and its movements accompanied by friction sound. There was no evidence of disease of the gall-bladder. A careful search revealed a few slightly enlarged lymphatic glands in various regions of the body. In other respects the man presented no evidence of syphilis. The blood examination showed 4,883,000 erythrocytes, 9650 leucocytes—a ratio of 1 to 506; hemoglobin was 75 per cent. Analysis of the stomach contents, after an Ewald test breakfast, showed 60 c.c. of expressed pure contents. Free hydrochloric acid .156, total combined hydrochloric acid .078, total organic acids and acid salts .039, total acidity 27.3. There were found present erythrodextrin, pepton and free albumin. Microscopically, it was negative. The urine examinations were negative.

Diagnosis—In the diagnosis the question of malignant growth, tuberculosis and gumma of the liver were considered. September 14 five milligrams of tuberculin were injected and his temperature thereafter taken every two hours for forty-eight hours. It showed a sharp rise to 101.4, but thereafter remained subnormal until the 16th, when he was given an injection of eight milligrams of tuberculin, after which his temperature rose sharply to 100.5, and again fell to subnormal, and remained so until the 20th, when he was given ten milligrams without a reaction. It was concluded that the condition was not tubercular. The evident, though slight, reaction to tuberculin increased the suspicion that the condition was syphilis, as a moderate reaction to tuberculin has occasionally been observed in the late manifestations of that disease. The history in the case pointing to trouble two years past, the general characteristics of the enlargement of the liver, the absence of irregularity, and evidence of primary carcinomatous focus, led us to exclude malignancy.

Treatment—The diagnosis of gumma of the liver being made, the patient was given potassium iodid in doses of twenty grains before meals, which was discontinued on the 24th, and was replaced by daily inunctions of mercurial ointment.

Results—Three days later the patient was unquestionably better. The treatment was continued. On the following day his weight was found to be 128 pounds. From this time on his progress continued, his color returned, appetite improved, his weight increased, and the tumor steadily decreased in size. In the early part of October the liver was apparently of normal proportion. The man was discharged from the hospital with directions to continue treatment.

It is possible for a gumma of considerable size to develop in the liver without the association of marked constitutional symptoms, as the following case illustrates:

CASE 3.—A man, aged 39, a merchant of good habits, was referred to me because of the appearance of a lump in the right side which was believed to be malignant. The man appeared to be in fair health, although he said that he had lost 25 pounds, suffered slightly from dizziness and weakness and pain under the right ribs, which was made worse when lying on the left side. His temperature was elevated one degree, his pulse rather weak, his digestion good. The mucous membrane of the mouth was unhealthy and the skin somewhat sodden in appearance. He passed 1000 c.c. of urine in 24 hours, specific gravity 1016, containing 20 grams of urea, an excess of indican, no albumin; a few cylindroids. The examination of the stomach contents showed a good gastric condition. The specific gravity of the blood was 1056, erythrocytes 4,760,000, leucocytes 10,400, hemoglobin 75 per cent. The differential count showed 78 per cent. of polynuclear cells. The red cells were somewhat pale with some megalocytes, microcytes and poikilocytes present. The man had not the cachexia of malignancy. I found on the upper lip, about one-half inch above the mucosa, a characteristic scar, and learned that when a boy about sixteen years old he had some kind of a wart-like sore, which was succeeded by an eruption on his body, for which he took medicine, and made a good recovery. He could not account for the presence of the sore and denied any venereal history. He was treated by a course of mercurial inunctions and made immediate improvement. Three months afterwards the tumor had disappeared. This man has been under observation for two years, and during the last year has been in perfect health.

This case is especially interesting in showing how easily one may be misled by the nature of a tumor. The man was emphatic in his denial of syphilitic infection, and was surprised when I explained to him my belief as to the nature of the disease. Beside that, his general health was less disturbed than might have been expected with a tumor the size of a baseball growing in the lower portion of his liver. It is generally conceded that serious syphilitic lesions of the liver occur only in the last stages of the disease. With the exception of perihepatitis and lymphatic involvement, I am convinced that this is true. The last-named lesion I have seen at a comparatively early period. Besides this, I am satisfied that in the early stages of the affection we find the liver congested, moderately enlarged, somewhat tender and functioning poorly. Very likely this is the immediate results of the constitutional disturbance—the systemic intoxication. In conclusion I may be permitted to express the opinion that hepatic complications are more common in syphilis than one is likely to infer from the literature on the subject. It is worthy of comment that the subject has not received the fulness of consideration that its importance would seem to warrant. I can not state how many cases have come under my observation, but the number is considerable; and in almost every instance the cases have been classified as either cirrhosis of the liver or carcinoma. When one finds cases in which there is a large accumulation of ascetic fluid, it is natural to make the mistake of considering the disease to be simple cirrhosis; but it would seem to be possible to make the differentiation in at least a great majority of cases.

DISCUSSION.

DR. WILLIAM OSLER, Baltimore—I congratulate the Section on the paper read not only on account of its intrinsic importance but on the emphasis laid on a subject of very special interest. I feel sure that visceral syphilis is much more common than the text-books or journals state, or than the general practitioner is willing to admit; not that it is any credit to the general practitioner that visceral syphilis is so common. It is a disease for the general practitioner and not for the specialist. The specialist rarely treats syphilis properly, i. e., thoroughly, and that is the task of the general practitioner.

Take the records showing the incidence of cerebral syphilis; the general practitioner says he has not seen a case of cerebral syphilis for ten years; he means, he has not recognized it. In reality, cases of brain and of visceral syphilis are very common, and the frequency means that the patients have not been systematically and thoroughly treated at the outset of the disease. With reference to diseases of the liver due to syphilis, my personal experience leads me to group them in four classes of cases:

1. Syphilis of the liver of congenital type. Formerly I used to see in infants diffuse syphilitic hepatitis of this type frequently enough; but now, as a clinical physician, I see few cases in young persons. These cases are almost always overlooked. It is to be borne in mind that syphilis of the liver of congenital type may occur as a late manifestation. One of the cases I saw was a boy of 11 years; the other a girl of 21 years.

2. In the adult, in this group of cases the patient comes before you with signs of ordinary cirrhosis of the liver, usually an adult man, a hard worker, a hard drinker, who gives a history of taking beer or alcohol. He presents the typical appearances of cirrhosis of the liver, i. e., jaundice, watery eyes, beginning ascites, enlarged smooth tender liver; it does not enter your mind for a minute that the man has syphilis of the liver. He is treated, perhaps purged; the ascites may disappear, but the patient leaves the hospital in the same condition as he entered and the diagnosis is made of cirrhosis of the liver. Yet this patient may return with the liver still enlarged, smooth and with the diagnosis of syphilis written on his back or on his shins in a well-marked syphilitic rash. These cases of syphilis of the liver that present the picture of cirrhosis may be difficult to recognize as syphilitic, yes, even impossible.

3. The third group of cases is more easily recognized because in addition to the cirrhosis there is tumor of the liver, i. e., an irregular liver with ascites and other signs of cirrhosis with often a slight jaundice. The liver may be small. The patient may be tapped three or four times under the supposition that he has to deal with cirrhosis of the liver. Under the influence of the iodids and mercury the ascites may disappear. I feel convinced that a certain number of cases of this type are supposed to be recoveries from cirrhosis of the liver. It should be remembered that Nature heals many of these cases. At the postmortem we know that there are found a large number of healed gummata which were not recognized during life.

4. There is a fourth group of cases occurring in the adult, to which Dr. Stockton has referred, namely, the solitary or multiple syphilitic tumors of the liver, without signs of ascites or enlargement, or at least, a great deal of enlargement, of the liver. There may be multiple or single tumors of the liver. Dr. Miller of Philadelphia reported a case in which the tumor was as large as the two fists on the surface of, and the back of, the liver; it lifted the whole surface of the abdomen. The patient was a robust man, in good health, with no impairment of the general nutrition. That tumor melted away completely under the use of mercury and the iodids. In this group the diagnosis may be made of carcinoma. I have recently seen an interesting case in which there was a distinct tumor of the left lobe of the liver, not very large, with stomach symptoms, pain, etc. This patient lost 25 pounds in weight; he became pale and anemic. At first glance it was thought he had a cancer of the stomach. Remembering other similar cases I inquired into a syphilitic history and found that he had had syphilis. I sent him into the hospital and antisiphilitic treatment was employed; within two months he gained 15 pounds in weight, and the anemia disappeared. Two months and a half after I first examined the tumor it had almost entirely disappeared. I have no doubt but that the case was one of syphilis of the liver.

DR. J. A. WITHERSPOON, Nashville, Tenn.—I have no doubt but that there are many cases of syphilis of the liver and visceral syphilis which are overlooked; I have no doubt that we all have overlooked them at times. I was very much impressed with one statement made, the similarity frequently noticed between enlargements, especially nodular enlargements, of the liver and malignant growths. I have more than once in my experience seen cases in which I felt confident it was of cancerous nature, which afterwards yielded under the use

of specific treatment. The patient's history will simulate that of cancer very closely and the condition of anemia which develops, with the loss of weight, simulates very closely cancer. I have repeatedly seen cases of acute hepatitis, syphilitic hepatitis, occurring in the eruptive period of syphilis; but I have never seen but a moderate enlargement in the early stages of syphilis, the enlargement coming on gradually and insidiously, with deep aching sensations in the region of the right hypochondrium, with progressive loss of flesh, with or without jaundice in the later stages. I have never seen a case of syphilis in which the liver reached a large size without the development of more or less ascites. I remember a case recently seen in which the ascites was so great that it was impossible to outline the liver at all and tapping the abdomen was the only means by which one could palpate the liver. To my surprise, after drawing off all the fluid, I found the liver extending down to the umbilicus. I remember one case which caused me some trouble in diagnosing between a gummatous mass and an enlarged gall bladder; I was in serious doubt whether it was the gall bladder or simply a localized enlargement from the right lobe of the liver.

There is another class of cases that I have seen in which the enlargement of the liver, with some dropsical effusion, was followed by obstruction of the bowel. A surgeon was called in and found by operation a very thick peritoneum and the obstruction was due to a coil of intestines dropping through a band of adhesions. This was removed and the patient recovered, but only after a long course of mercurial inunctions was the recovery complete. This case impressed me considerably; he had a distinct history of syphilis and he had been under treatment and there was no doubt that the primary cause of his trouble was syphilis producing the adhesive band.

So far as the use of iodids and mercurials are concerned I want to say that I have never gotten good results in visceral syphilis by the use of iodid of potassium alone. I have tried it in 20-grain doses, as mentioned by Dr. Stockton, and I have used it in enormous doses without any lessening of the size of the liver. But in the hypertrophic stage it will yield to mercurial inunctions. There is one class of liver syphilis which will not yield to any treatment, that class of cases mentioned by Dr. Stockton in which there is a contraction of the liver. In an enlarged liver with distinct syphilitic involvement, with the glandular enlargement, anemia, etc., these symptoms will disappear under proper treatment, but the indurated liver will remain as before. In this class we find the rigid valley and hills on the liver surface and I have never seen any good result from the antisyphilitic treatment employed. We should not expect it after fibrous contraction has taken place.

One of the largest livers I have ever seen was a syphilitic one and it is wonderful how long a time a child, with evident inherited syphilis, will carry such an enlarged liver without apparent symptoms developing other than those of a general malnutrition. I remember one case, a child one year old, in which the liver reached to the umbilicus. Without a history of syphilis I did not feel that I was warranted in calling it of syphilitic origin. It was associated with general anemia, snuffles, attenuated body; the child developed quite a lot of little eruptions, more like macules, which I attributed to a disordered stomach. What it was I did not know. Under mercurial inunctions there was a remarkably quick recovery.

I should like to refer to one other point in carrying the mercurial inunctions too far in the treatment of syphilis. While the local lesions may improve the systemic condition may become very alarming, the blood count dropping, and I have had to stop the antisyphilitic treatment and place the patient on general restoratives temporarily and then return to specific treatment.

I have seen but a few cases of visceral syphilis, recognized as such, that did not have marked constitutional manifestations to guide us. There is one symptom which invariably brings about some doubt, especially in my country where we regard every fever lasting a few weeks as suspicious of malarial poison, and that is fever. In a syphilitic subject you will find, with the fever, localized tenderness or soreness. I saw one case occurring in a woman in which the retroperitoneal or mesen-

teric glands were enormously enlarged; because the cervical and axillary glands were also enlarged, and because there was a great deal of anemia, I regarded at first the case as one of Hodgkin's disease, and the rise in temperature was considered to be that which occurs in this disease. I gave an unfavorable prognosis and placed the patient on arsenic and tried my best to ease the pathway to the other side. The patient went on, was better and worse, and finally went to the house of a practitioner who afterward told me that whenever he had a case the true nature of which he did not know he placed the patient on antisyphilitic treatment. He treated this patient in this manner and she is now enjoying good health. I saw the patient a few months ago and she looked like a different woman. I made the mistake when I looked for something rare and so I let her slip through my hands. Gentlemen, I think it is a good plan in cases of suspected syphilis to try specifics; this is especially advisable in that large type of cases referred to by Dr. Osler as cerebral, which manifests itself in more ways than any disease in my knowledge. When I find a case with peculiar symptoms, which point to the nervous system, I do not hesitate to try the antisyphilitic treatment, if I can not exclude syphilis or make a diagnosis, which is impossible in a great many cases.

DR. RICHARD C. CABOT, Boston—I will mention three points: 1. I should like to reiterate what Dr. Witherspoon has stated, namely, that in some cases it is for a time impossible to affect visceral syphilis by antisyphilitic treatment. Two soldiers of the Spanish war came to me affected with syphilis, with a perfectly clear diagnosis, the lesions affecting various organs. Antisyphilitic treatment was vigorously followed without the slightest effect. Measures were then adopted for building up the general health, and, after that had been accomplished the antisyphilitic treatment was effective.

2. I believe it is possible to mistake uremic hemiplegia for cerebral syphilis. I can recall a patient who gave a history of syphilis, with cerebral symptoms and signs, corresponding to what we would expect in cerebral syphilis: hemiplegia with gradual onset, followed by loss of consciousness. A diagnosis of cerebral syphilis was made. The man died and at autopsy a perfectly normal brain was found. There was then noted a glomerular nephritis. It was a case of uremic hemiplegia.

3. With regard to the diagnosis of syphilis, a year or two ago I made studies of the blood in syphilis and tried to verify the findings of Justus, who thought that he obtained in the blood of syphilitics, a characteristic reaction, a great decrease in the amount of hemoglobin after mercurial inunctions. Further investigations have convinced me that the method employed by him was unreliable.

DR. H. B. FAVILL, Chicago—The arraignment by Dr. Osler of the general profession for its remissness in detecting syphilis as a cause of various conditions opens to me a train of reflection. It is true that a great deal of visceral syphilis is misinterpreted. This is, of course, in large part due to the lack of knowledge of the possible facts on the part of physicians. Assuming, however, a proper pathologic conception of the process, on what lines are the conclusions to be laid down? In most instances there is great indefiniteness in the symptomatology and the discriminating man hesitates to adopt as a certainty a hypothesis that has a foundation so inconclusive even though probable. Is it not true that in the majority of the cases of visceral syphilis the diagnosis is reached by exclusion? This presupposes an attitude of mind with regard to the subject that is never oblivious of the possibilities in that direction, yet for the completion of the diagnosis there is necessary to the fullest extent the capacity to weigh and reject alternative views even more than an ability to recognize the earmarks of syphilis. Herein lies the gist of this subject as I see it. It must be admitted, however, that in a very large number of cases the diagnosis is not satisfactorily reached until after the therapeutic test. A recital of experiences by men of such broad experience as Drs. Stockton and Osler will show beyond a doubt that much of their procedure has been based on suspicion subsequently verified by response to treatment. In this there is a note of great encouragement to us of less confidence in the subject, for it is clear that the solution of the matter is to a large extent the constant bearing in mind

of that possibility, with an especial determination not to be swayed by negative history.

There is a phase of this subject not touched on in this discussion, namely, morbid visceral function in those of undoubted syphilitic antecedents, unassociated with anatomic lesions as we now know them. Is there a syphilitic physiology that is susceptible of recognition? Without going into that subject, I wish merely to call attention to the peculiarities of visceral function in children of syphilitic parentage who have none of the obvious signs of inherited disease. I think the experience of those who have investigated that aspect of the disease will accord with mine that there is much to be suspected in that direction. Of all phases of the subject this is the most distinctly dependent on the therapeutic test, which, though open to obvious objections, is not to be despised.

DR. M. H. FUSSELL, Philadelphia—I should like to call attention to one point not touched on by the writer of the paper, i. e., the absolute unreliability of the negative history of syphilis in cases with visceral manifestations; repeatedly have I seen cases of unquestioned visceral syphilis, which responded to antisyphilitic treatment, in which I could not obtain any primary or secondary syphilitic symptoms. With many the reason is that they are careless in their observations of the body and these patients do not have their attention called to their bodies until something hurts. An instance occurred recently in a man with a typical sore throat. I asked him if he had any rash on his body, and he answered, "No, there never has been." On being stripped, however, there was found a typical syphilitic roseola; the patient had been absolutely ignorant of its presence. Within the past few years I have had two cases of visceral syphilis occurring in infants in which I have used inunctions of mercury and iodid of potassium in addition, one grain three times a day; one patient died of an enterocolitis. I should like to ask if this was a coincidence, or the result of the iodid administered.

DR. C. F. HOOVER, Cleveland—I should like to say a few words regarding visceral syphilis. Some ten years ago I was much impressed by an autopsy on an American medical student who was supposed to be suffering from galloping consumption. He was under the care of Professor Nothnagel, who sent him to Switzerland where he did not improve. The cause of his death proved to be syphilis and not consumption. Since then I have looked for visceral syphilis and have been afraid of sending cases with syphilis of the lungs to Colorado. I have seen two cases of syphilis of the lungs, one beyond a question of doubt. This was a young man, who gave a clear history of syphilis, who had a marked dulness at the base of both lungs, expectoration of blood, temperature, night-sweats, loss of weight and other signs quite characteristic of tuberculosis, but an examination of the sputum revealed no tubercle bacilli. Antitubercular treatment failed to give relief, but iodid of potassium caused the fever to cease and, two months later, no evidence was to be found in the lungs and the patient is well to-day. Another man came under my observation with syphilis of the liver and spleen, with evidences of older gummata over the region of the sternum and clavicle and the physical signs of infiltration at the apex of the right lung. The man was unquestionably a syphilitic and, under anti-syphilitic treatment, all the physical signs, the dulness and râles, disappeared within a few weeks. Visceral syphilis occurs, in the vast majority of cases, in the liver and then occurs next in frequency in the spleen.

I should like to refer to one point in the treatment of these syphilitic cases. I think that from the discussion of the subject one may be misled; the impression that I have gotten so far is that, in all cases, no therapeutic result will be obtained in marked instances of retraction and lobulation. I remember several instances where the patient was under anti-syphilitic treatment, and still the fluid reaccumulated. To illustrate the point: one patient had serum in the abdominal cavity and remained in the hospital six months. His spleen was enormous. A diagnosis of syphilis was made. Iodids and mercurial inunctions were given without the slightest effect. The serum reaccumulated and he was tapped twice a week and then three times a week, then three or four times a

day, drawing off four or five quarts of serum. On the day following the tapping the abdomen would again be filled with serum. At last he had a profuse hemorrhage from the bowels and died. The autopsy showed the abdominal cavity dry. It seems that he was pumping a big wave of blood serum which contained no erythrocytes.

DR. THOMAS McCRAE, Baltimore—In answer to the question as to the treatment of solitary tumors of the liver due to syphilis, the patients referred to by Dr. Osler were placed on potassium iodid and mercurial inunctions; the iodid was given in 20-grain doses three times a day for six months. In the last case referred to by Dr. Osler improvement followed in five weeks.

DR. JAMES J. WALSH, New York—Since mercury is so prompt and effective in its action on syphilitic lesions, it is unfortunate that opportunities for its successful employment should sometimes be missed. Undoubtedly there are many cases of visceral syphilis in this country the diagnosis of which is missed entirely. It can not be too much insisted on that the absence of syphilitic history must not be accepted as an absolute guide in this matter. Syphilitic cirrhosis of the liver is without doubt sometimes treated as alcoholic cirrhosis. I have myself seen one case within a year in which a patient had been tapped several times for an ascites presumed to be of alcoholic hepatic origin, but which was really due to a large gummatous liver. Mixed treatment did away with the necessity for further tapping. A certain number of fatal cases occur every year that would surely survive if the mixed treatment were properly employed. In obscure lesions of the viscera the rule adopted by the neurologists should be adopted also by the general practitioner. When degenerative changes exist for which no good reason can be assigned the patient is put on specific treatment even though there should be no syphilitic history. There will be no regret if this rule is followed. Secondary symptoms are often so light as to escape notice and a primary lesion may run a typical course without attracting attention. I have seen a physician with chancre on the finger that had existed for nearly two weeks without exciting his suspicions. Two years ago I saw a professor in one of our colleges who came because of a tumor apparently of the splenic flexure of the colon. It was thought to be malignant and one of the best surgeons in the country advised operation and gave a very bad prognosis. Despite the absence of syphilitic history the therapeutic test of the mixed treatment was employed and the patient began to improve almost immediately. The tumor decreased greatly in size. It is now two years and four months since he was given less than six months to live and though there are some remnants of the tumor still left he considers himself in good health.

DR. T. B. FUTCHER, Baltimore—There is one point which should be brought up which has a bearing on visceral syphilis, and that is the possibility of visceral syphilis, in a percentage of cases, being the cause of fever of obscure origin. Recently I recorded three cases of fever of syphilitic origin occurring in Dr. Osler's wards. Sidney Phillips, a number of years ago, reported an interesting case of intermittent fever occurring in a patient who had contracted syphilis eight years previously. For a period of eight months this patient had had fever which was clinically indistinguishable from the fever observed in malaria. It occurred every other day, with chills and sweating. No malarial parasites were found in the blood. Later it was found that the husband had had syphilis shortly before he was married and his wife had contracted the infection from him. The patient was placed on iodid of potassium and immediately the chills, fever and sweating subsided. The fever of late syphilis is generally of continuous type, or of the intermittent type already described. In one of the three cases I referred to, the patient did not know that he had had syphilis and came into the hospital with a continuous type of fever which lasted for some weeks. The case occurred before the days of the Widal test and it was regarded and treated as typhoid fever. When the temperature refused to go down under treatment a subsequent examination revealed the fact that there was slight thickening of the clavicles and some evidence of cirrhosis of the liver. It was suggested that possibly the fever might be of

syphilitic origin. Under antisyphilitic treatment the temperature returned to the normal in three or four days. I speak of this case because of its obscure origin, due probably in part to visceral syphilis. As Dr. Hoover has already mentioned, a good many of these cases may be mistaken for tuberculosis of the lungs. Some years ago Dr. Janeway read a paper in which he reported a number of cases of syphilitic fever which had been sent to the Adirondacks for treatment for tuberculosis of the lungs. On the administration of the antisyphilitic treatment the fever ceased and the patients soon recovered.

Dr. Strockton, in closing—I wish to express my pleasure in finding that the subject has such a widespread interest; I believed that it would be interesting and I have not been disappointed. Dr. Osler has referred to a case which closely resembled ordinary cirrhosis of the liver and which was with difficulty separated from and distinguished from simple cirrhosis. Some cases reported by me, occurring in adults, had ascites, jaundice and associated symptoms. Dr. Osler dwelt on the point of associated jaundice and ascites, but personally I find fewer cases of cirrhosis of the liver with jaundice. When I find a patient suffering from a liver condition that may be cirrhosis, with associated jaundice and cachexia, I feel that the patient probably has visceral syphilis and not simple cirrhosis of the liver. In other words, jaundice with evidences of cirrhosis leads me at least to the suspicion of syphilis.

Dr. Witherspoon has stated that he has rarely seen much enlargement of the liver without ascites as an accompanying symptom. There are cases of enlargement of the liver of syphilitic origin, without ascites, and these are not so very common if we exclude general syphilitic hepatitis. In syphilitic hepatitis we almost invariably have jaundice. Yet we here occasionally find large or small gummata scattered through the liver, but we may find a good deal of enlargement without accompanying ascites; it depends largely on where the gumma is located. I have to-day reported cases in which there were tumors without either ascites or jaundice, and in one of them the disease gave rise to an enlargement of the liver of considerable proportions. The Doctor is right in stating that there is one form of syphilis of the liver which can not be improved by treatment, and that is in those instances where the liver becomes contracted as a late result. Such cases may not be expected to improve for such a patient is to that extent without a liver; still, there may be a temporary improvement. I remember a colored man who had an enormous hepatic growth which was thought to be a gumma; although he improved under treatment, ultimately he died from the results of a contracted liver. I doubt very much whether cases of syphilis of the liver will improve under any general treatment, unless accompanied by antisyphilitic treatment; I have never seen a case that did so. In cases of syphilis with malaria or some other associated condition no good effect will be produced unless the antisyphilitic treatment be employed in conjunction with the other treatment. Without mercury and the iodids you are opposing a hopeless proposition; but, with the addition of such measures, and the association of general hygienic treatment, you have a favorable prognosis.

Dr. Favill has asked Dr. Osler how he treated a case of syphilis which resembled malignant growth, and I was surprised to hear the question. I do not see how he could treat it except by the iodids and mercury—by inunctions—by all the usual means. Visceral syphilis is not a rare condition, but is much more common than is supposed. I have been chagrined that so many of such cases escaped me in former years—those that I now am curing by antisyphilitic treatment.

Diagnosis versus Drugging.—In the fight which we have to wage incessantly against ignorance and quackery among the masses and follies of all sorts among the classes, *diagnosis*, not *drugging*, is our chief weapon of offense. Lack of systematic personal training in the methods of the recognition of disease leads to the misapplication of remedies, to long courses of treatment when treatment is useless, and so directly to that lack of confidence in our methods which is apt to place us in the eyes of the public on a level with empirics and quacks. —Osler.

AN ANALYSIS OF SEVENTY CASES OF GASTROPTOSIS.*

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It is the purpose of the present contribution to place on record the study of a number of cases of gastroptosis, to analyze them and to draw conclusions which will be statistically accurate in the light of our present knowledge of the condition. The view that gastroptosis is usually associated with downward displacement of the transverse colon and movability of one or both kidneys and more rarely of the liver, has long obtained, but if we except the paper of Arneil there has been wanting a collection of cases systematically studied on which to base definite conclusions.

The records from which our material has been drawn, except a few cases in our private practice, were taken from our service in the Medical Dispensary of the Hospital of the University of Pennsylvania in the past two years. Our conclusions are based on the study of seventy consecutive cases. The positions of the stomach and colon were determined after inflation with air, the kidneys examined for mobility, the recti muscles for separation and the gastric contents after a test meal. Our investigations included as well the condition of the blood and urine.

The authors have been particularly impressed by the frequency of gastroptosis in women in general, and especially in that class which present themselves at our dispensaries. In thirty-five consecutive cases of women applying with stomach symptoms of the flatulent type gastroptosis was found in all. We are of the opinion that gastroptosis and enteroptosis are much more common than is usually supposed, and that in a very large proportion of all women complaining of symptoms of gastric motor insufficiency the dominant factor is downward displacement of the pyloric end of the stomach.

The pathogenesis of splanchnoptosis has not been touched on, for, unfortunately, the clinical study of these cases sheds little light on this much-vexed question. As to the theory of a congenital or acquired diathesis predisposing to splanchnoptosis there can be but little doubt that women of weak muscular organization are predisposed to it, and are more easily affected by exciting causes, which have little or no effect on other individuals. The most common of these exciting causes is probably something that tends to constrict the thorax or upper abdomen or to increase the volume of the abdominal cavity. Perhaps the truest thing that can be said in this connection is, that different causes are potent in different cases, and it is not wise or necessary to try to formulate a theory that will apply in every instance.

Our series included all types of individuals. Not only women in middle life who had borne children and who showed a considerable degree of diastasis of the recti muscles, but also males and young nulliparous women whose abdominal walls were firm and where normal approximation of the recti existed.

POSITION OF THE STOMACH.

The stomach was first emptied by lavage and then inflated with air through the tube. As the organ is dis-

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. Frank A. Jones, George Dock and J. M. Anders.

tended it rises to the abdominal wall, and its outline can usually be plainly seen. By percussion and auscultation, however, its position and size are accurately determined and noted on a suitable diagram. In order to convey to the reader an approximate idea of the size and position of the stomach the authors have divided the distance between the umbilicus and ensiform, and the umbilicus and top of the symphysis, each into four equal divisions. The two principal areas thus subdivided are usually equal, and in persons of average stature are about five to six inches or twelve or fifteen centimeters in extent. While at the first glance this may appear somewhat confusing, practically it is not so, as it will be found that nearly all displaced stomachs will fall

position, slightly above and behind the apex of the heart, and the general curve of the displaced viscus has not inaptly been described by Kelling as resembling a fishhook (diagram of typical cases).

In a recent paper by Dr. Steele, the statement is made that in his list of cases there were several that showed displacement of the cardiac end, giving rise to the descensus in toto or hunting-horn shape described by Riegel. Further examination of these cases have convinced us that this was an error. While theoretically such displacement is possible, no instance of it appears in our list, which includes Dr. Steele's cases, and we feel that its occurrence must be very rare. The cases in which the error was made presented an extreme degree of pyloric

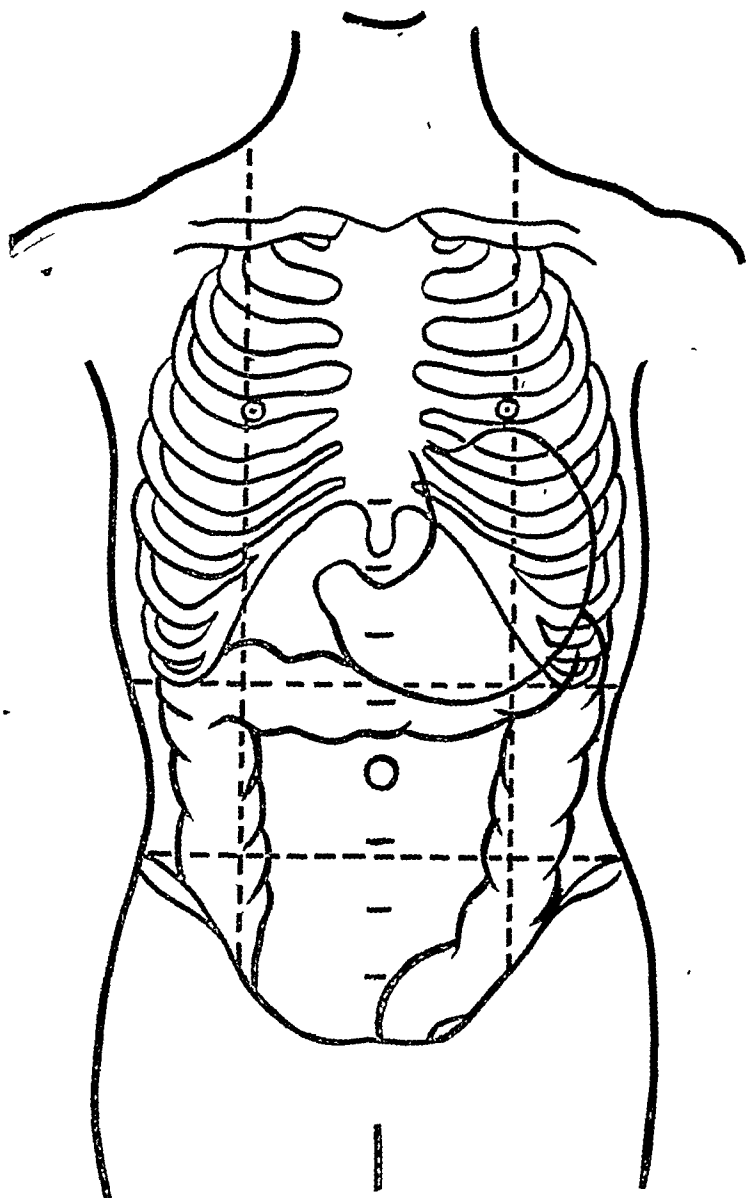


Fig. 1.—Position of normal stomach and large intestine. (Quain.)

into one or another of these positions without in any sense coercing natural boundaries to arbitrary lines. It may incidentally be said of the umbilicus, as of the nipple, that it is not a fixed point, but for practical purposes it is a fairly accurate landmark.

Following this plan it will be found that the upper and lower curvatures or borders of the stomach may in the vast majority of cases be spoken of as falling in the quarter, mid or three-quarter line or position above or below the umbilicus; and it may be stated that in the prevailing type of gastroptosis the umbilicus is found to be the center of a circle, formed by the dilatation of the pyloric end of the stomach with the upper and lower curvatures midway between the ensiform and symphysis respectively. The cardiac end remains in its normal

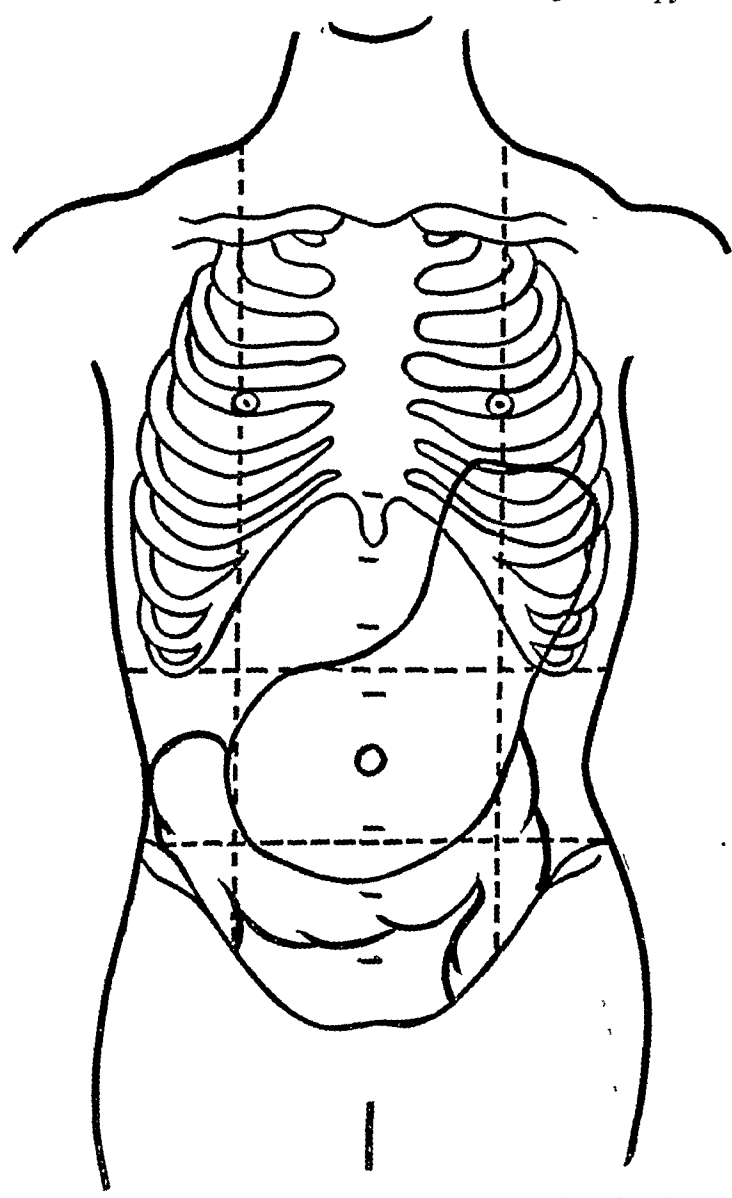


Fig. 2.—Case 31. Female, 27 years. Gastroptosis and enteroptosis. Pyloric dilatation.

dilatation in stomachs originally small, but careful examination has convinced us that the cardiac end was in its normal position. In our series of 70 cases the upper and lower curvatures in 26 were midway between the ensiform and umbilicus, and symphysis and umbilicus respectively; in 12 the upper curvature was in the quarter position above, with the lower curvature midway below; in 9 the upper curvature was in the three-quarter position above, with the lower curvature midway below; in 7 the upper curvature was midway, the lower curvature in the quarter position below; in 5 the upper curvature occupied the three-quarter position above, the lower curvature the one-quarter position below; in 3 the upper curvature was in the one-quarter position above, with the lower curv-

ature in the three-quarter position below; in 2 the upper curvature was midway, with the lower curvature in the three-quarter position below; in 2 cases the upper curvature was at the ensiform and the lower curvature was midway between the umbilicus and symphysis; in 2 cases the upper curvature was at the umbilicus and the lower curvature midway; in 1 case the boundaries were at the ensiform and midway between the umbilicus and symphysis, and in 1 case the boundaries were in the one-quarter position above and below the umbilicus.

DILATATION OF THE STOMACH.

Some dilatation of the pyloric end of the stomach was present in every one of our series. The average de-

it may enter the third portion and thus on into the small intestine.

When the cardiac end of the stomach is enlarged as well we have considered the condition to be one of general gastrectasia. (Fig. 3.) Our investigations have convinced us that in a majority of cases general dilatation does not long exist without downward displacement of the pylorus, due to the dragging of the enlarged and over-weighted pyloric end on its supporting ligaments.

The proper etiologic relation of pyloric and general dilatation is probably correctly explained by saying that pyloric dilatation is secondary to a primary gastropotosis, while in general dilatation with gastropotosis the former is the primary factor.

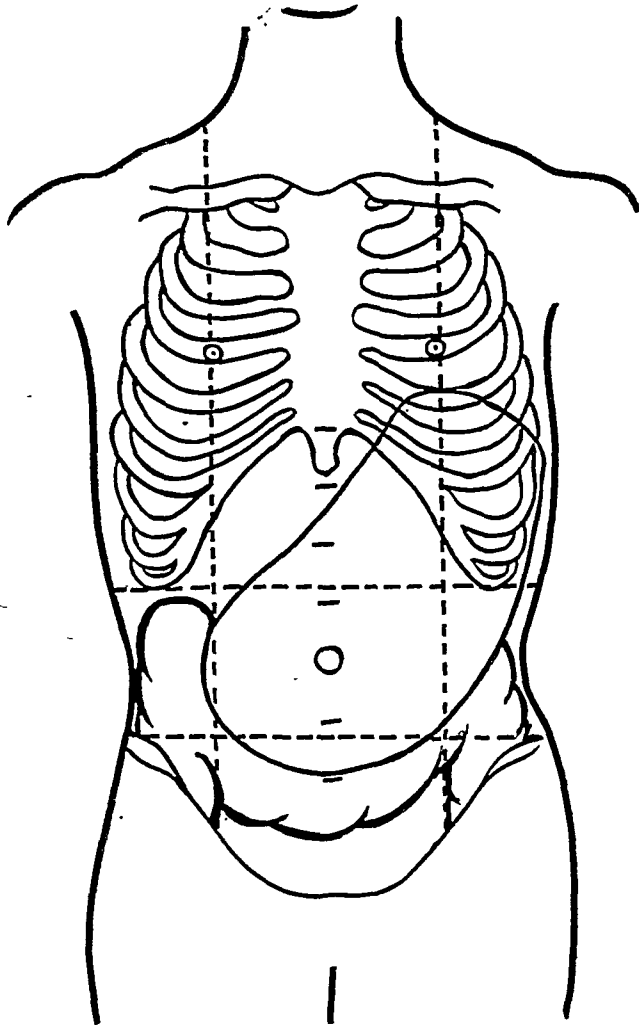


Fig. 3.—Case 53. Male, 30 years. Gastropotosis and general dilatation. Enteropotosis.

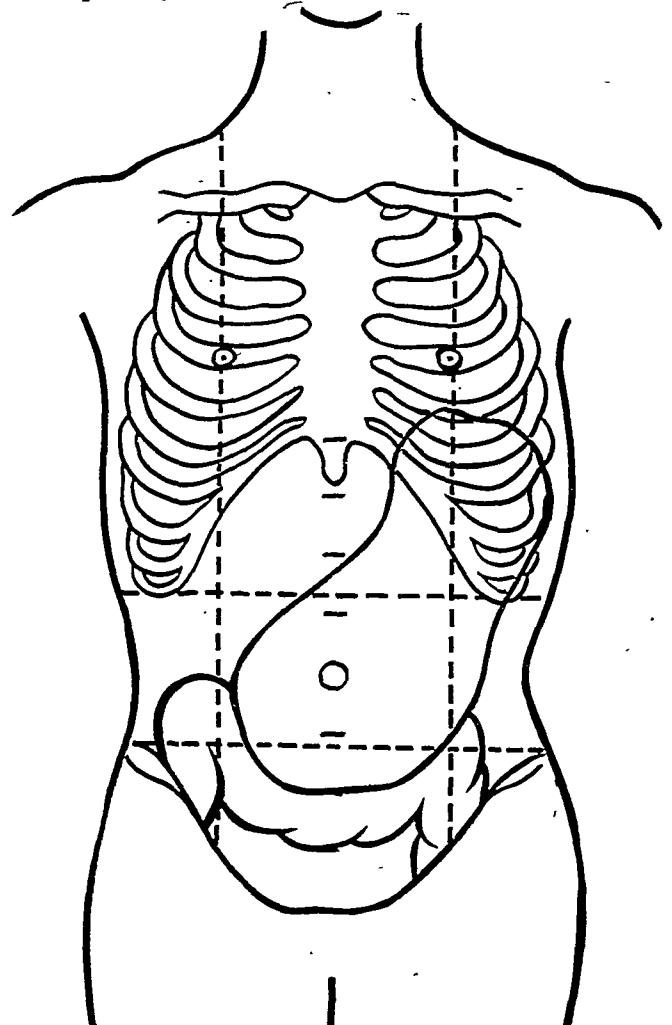


Fig. 4.—Case 52. Female, 34 years. Gastropotosis and pyloric dilatation. Enteropotosis.

gree of enlargement is such that the outline of the pyloric extremity forms three-quarters of a circle, of which the center is the umbilicus. (Fig. 2.) It is conceivable that there may be a stage, very early in the course of primary gastropotosis, when pyloric dilatation is absent, but by the time the patient seeks medical advice such a condition is invariably present. This form of dilatation may readily be accounted for by the loss of muscular tone, stagnation and fermentation of the retained contents and the consequent distention. Another factor in its causation is the increased effort necessary on the part of the weakened muscle to force the food up and through the pylorus and the pro-lapsed first and second portion of the duodenum, so that

The comparison of the forms of dilatation occurring in the two sexes is of interest, since it shows that general dilatation in combination with downward displacement of the pylorus is more common in men, implying that gastropotosis in the male sex is due to primary dilatation in more than half the cases in which downward displacement of the pylorus exists.

Gastropotosis with pyloric dilatation alone occurred in 50 women and in 7 men.

Gastropotosis with general dilatation occurred in 2 women and in 10 men.

POSITION OF TRANSVERSE COLON AND FLEXURES.

The question of the position of the transverse colon, and more especially of the colonic flexures, is one of

ANALYSIS OF CASES.

Case No.	Position of Stomach. (U. c.—upper curvature; g. c.—greater curvature; c.—cardiac end.)	Form and Degree of Dilatation of Stomach.	Position of Colon. (H.—hepatic flex- ure; umb—um- bilicus.)	Movability of Kidney. (R.—right; L. —left.)	Blood: per cent of hemoglo- bin and red cells.	Diastasis of recti muscle.	Analysis of Test Meal. Ta. HCl.	Age and Sex.	Remarks.
1	U. c., $\frac{3}{4}$ position; g. c., midway; c., 6th rib.	Pyloric, consider- able.	H. at umb.	Not palpable..	H. 35; r. c. 70.	None .	37 5	11, F.	Chlorosis.
2	U. c., midway; g. c., mid- way; c., 5th rib.	Pyloric, consider- able.	H. at level of umb.	R. 1 degree . .	H. 80; r. c. 108.	" .	45 10	27, F.	
3	U. c., $\frac{3}{4}$ position; g. c., midway.	Pyloric, consider- able.	H. 3 cm. below umb.	" " . .	H. 35; r. c. 94.	" .	30 10	41, F.	
4	U. c., midway; g. c., $\frac{1}{4}$ position; c., 6th rib.	Pyloric	H. at costal mar- gin.	Not palpable..	H. 78; r. c. 96.	" .	35 7	18, F.	
5	U. c., midway; g. c., $\frac{1}{4}$ position; c., 7th rib.	"	H. at level of umb.	" " . .	H. 70; r. c. 110.	3 cm. .	40 8	27, F.	
6	U. c., $\frac{3}{4}$ position; g. c., midway; c., 5th rib.	Pyloric, consider- able.	" " "	R. 3 degrees . .	H. 70; r. c. 102.	5 cm. .	25 1	45, F.	Three children; floating tenth rib.
7	U. c., $\frac{3}{4}$ position; g. c., $\frac{1}{4}$ position; c., 4th inter...	Pyloric, consider- able.	" " "	R. 2 degrees . .	H. 85; r. c. 92.	6 cm. .	36 10	30, F.	
8	U. c., midway; g. c., $\frac{1}{4}$ position; c., 5th rib.	Pyloric, consider- able.	" " "	R. 1 degree . .	H. 90; r. c. 108.	None .	22 4	40, F.	Floating tenth rib.
9	U. c., $\frac{1}{4}$ position; g. c., midway; c., 5th rib.	Pyloric, consider- able.	" " "	R. 2 degrees . .	H. 85; r. c. 108.	3 cm. .	31 1	42, F.	
10	U. c., midway; g. c., mid- way; c., 5th rib.	Pyloric, consider- able.	H. 5 cm. below umb.	Not palpable .	"	None .	"	26, F.	
11	U. c., midway; g. c., $\frac{1}{4}$ position; c., 6th rib.	Pyloric	H. at level of umb.	R. 2 degrees . .	"	3 cm. .	"	42, F.	One child.
12	U. c., midway; g. c., $\frac{1}{2}$ position; c., 5th rib.	"	H. 3 cm. below umb.	" " . .	"	"	"	47, F.	Three children.
13	U. c., $\frac{3}{4}$ posi.; g. c., mid- way; c., 5th interspace.	" great	H. at level of umb.	Not palpable..	H. 92; r. c. 110.	Slight..	28 7	42, F.	Ten children.
14	U. c., midway; g. c., mid- way; c., 6th interspace.	Pyloric, consider- able.	" " "	" " . .	"	"	"	42, F.	Five children.
15	U. c., midway; g. c., mid- way; c., 6th rib.	Pyloric, consider- able.	" " "	R. 2 degrees . .	H. 78; r. c. 96.	" .	30 2	43, F.	
16	U. c., $\frac{3}{4}$ posi.; g. c., mid- way; c., 6th interspace.	Pyloric, great . . .	" " "	R. 1 degree . .	H. 75; r. c. 84.	3 cm. .	"	66, F.	Eight children.
17	U. c., $\frac{1}{4}$ position; g. c., midway; c., 6th rib.	Pyloric	" " "	Not palpable..	H. 80; r. c. 106.	None .	34 9	22, F.	
18	U. c., $\frac{3}{4}$ position; g. c., midway; c., 5th rib.	General	H. 3 cm. below umb.	" " . .	H. 90; r. c. 110.	" .	45 9	23, M.	
19	U. c., $\frac{3}{4}$ position; g. c., $\frac{1}{4}$ position; c., 4th rib.	Pyloric, consider- able.	H. at level of umb.	" " . .	H. 88; r. c. 106.	" .	"	38, M.	
20	U. c., midway; g. c., mid- way; c., 5th rib.	General	H. 3 cm. above umb.	" " . .	"	" .	"	30, M.	
21	U. c., midway; g. c., mid- way; c., 6th rib.	Pyloric	2 cm. above umb.	" " . .	"	" .	50 15	30, M.	
22	U. c., $\frac{3}{4}$ position; g. c., $\frac{1}{4}$ position; c., 5th rib.	General	H. at level of umb.	" " . .	H. 90; r. c. 100.	" .	70 35	35, M.	
23	U. c., midway; g. c., mid- way; c., 5th rib.	"	H. at costal mar- gin.	" " . .	"	" .	"	32, M.	
24	U. c., midway; g. c., mid- way; c., 5th rib.	Pyloric	H. at level of umb.	"	"	" .	6 0	27, F.	One child.
25	U. c., midway; g. c., $\frac{1}{4}$ position.	"	H. 5 cm. below umb.	R. 3 degrees . .	H. 65; r. c. 60.	4 cm. .	Present	41, F.	Four children; operati'n; nephrorrhaphy; suspen- sio uteri and approxi- mation of recti.
26	U. c., $\frac{1}{4}$ position; g. c., midway; c., 6th inter.	"	"	"	H. 72	"	45 20	20, F.	
27	U. c., midway; g. c., mid- way; c., 6th rib.	"	"	R. 1 degree . .	H. 90	"	40 0	37, F.	
28	U. c., $\frac{3}{4}$ position; g. c., midway; c., 6th inter.	Pyloric, consider- able.	"	" " . .	H. 60; r. c. 64.	"	56 15	43, F.	
29	U. c., midway; g. c., mid- way; c., 6th rib.	Pyloric, consider- able.	"	" " . .	"	None .	25 0	48, F.	
30	U. c., midway; g. c., mid- way; c., 6th rib.	Pyloric	"	" " . .	H. 70; r. c. 63.	"	50 15	35, M.	
31	U. c., midway; g. c., mid- way; c., 6th interspace.	"	"	Not palpable..	H. 90	"	43 4	27, F.	
32	U. c., midway; g. c., mid- way; c., 7th rib.	"	"	" " . .	H. 90; r. c. 100.	"	16 Trace	47, M.	
33	U. c., midway; g. c., $\frac{3}{4}$ position; c., 6th inter.	Pyloric, great . . .	"	" " . .	H. 68	"	8 0	50, F.	Three children.
34	U. c., $\frac{3}{4}$ position; g. c., $\frac{1}{4}$ position; c., 6th rib.	Pyloric, consider- able.	"	" " . .	H. 90; r. c. 100.	3 cm. .	"	30, F.	Seven children.
35	U. c., $\frac{3}{4}$ position; g. c., midway; c., 4th rib.	Great general . . .	"	" " . .	H. 90; r. c. 100.	None .	64 30	55, M.	
36	U. c., $\frac{1}{4}$ position; g. c., midway; c., 6th inter.	Pyloric	"	R. 1 degree . .	H. 70	"	"	38, F.	
37	U. c., $\frac{1}{4}$ position; g. c., $\frac{3}{4}$ position; c., 7th rib.	Pyloric, consider- able.	"	"	"	"	"	45, F.	One child.
38	U. c., $\frac{1}{4}$ position; g. c., $\frac{3}{4}$ position; c., 7th rib.	Pyloric, consider- able.	"	R. 2 degrees . .	H. 95; r. c. 100.	"	"	35, F.	Four children.
39	U. c., $\frac{1}{4}$ position; g. c., midway; c., 6th inter.	Pyloric	"	" " . .	H. 75; r. c. 100.	"	"	30, F.	Two children.
40	U. c., $\frac{1}{4}$ position; g. c., midway.	"	"	"	"	3 cm. .	"	50, F.	
41	U. c., $\frac{1}{4}$ position; g. c., midway; c., 7th rib.	"	"	"	H. 65; r. c. 90.	"	5 0	26, F.	Four children.
42	U. c., $\frac{1}{4}$ position; g. c., $\frac{3}{4}$ position; c., 7th inter.	General	"	R. 1 degree . .	H. 65; r. c. 90.	"	17 0	40, F.	
43	U. c., $\frac{1}{4}$ position; g. c., midway; c., 7th inter.	Pyloric	"	" " . .	H. 95; r. c. 100.	"	"	20, F.	
44	U. c., midway; g. c., mid- way; c., 6th interspace.	"	"	Not palpable..	H. 95; r. c. 100.	None .	"	27, M.	
45	U. c., midway; g. c., $\frac{1}{4}$ position; c., 6th inter.	"	"	R. 1 degree . .	H. 95; r. c. 100.	3 cm. .	"	27, F.	One child.
46	U. c., $\frac{3}{4}$ position; g. c., $\frac{1}{4}$ position; c., 4th inter.	General	"	" " . .	H. 95; r. c. 100.	None .	46 0	43, M.	
47	U. c., midway; g. c., $\frac{1}{4}$ position.	Pyloric	"	" " . .	H. 95; r. c. 100.	"	"	26, F.	
48	U. c., $\frac{1}{2}$ position; g. c., $\frac{1}{2}$ position; c., 6th rib.	"	H. at costal mar- gin.	R. 2 degrees . .	H. 95; r. c. 100.	" .	25 9	40, F.	
49	U. c., midway; g. c., mid- way; c., 6th rib.	"	H. below umb. . .	R. 3 degrees . .	H. 95	" .	56 15	27, F.	Opera.; nephrorrhaphy; gastroplexy.
50	U. c., $\frac{1}{4}$ position; g. c., $\frac{1}{4}$ position; c., 6th rib.	General	"	Not palpable..	H. 68; r. c. 76.	"	71 10	25, M.	
51	U. c., midway; g. c., mid- way; c., 6th rib.	"	H. at costal mar- gin.	" " . .	H. 89	None .	0	71, M.	
52	U. c., midway; g. c., mid- way; c., 6th interspace.	Pyloric	H. 2 cm. below umb.	R. 2 degrees . .	H. 95; r. c. 80.	" .	"	34, F.	Operation; gastroplexy.

ANALYSIS OF CASES (Continued.)

Case No.	Position of Stomach. (U. c., g. c., pubis.)	Grade of Displacement	Position of Colon. (H.—hepatic flexure; umb.—umbilicus.)	Movability of Kidney. (R.—right; L.—left.)	Blood: per cent. of hemoglobin and red cells.	Diastasis of recti muscle.	Analysis of Test Meal. Ta. HCl.	Age and Sex.	Remarks.
53	U. c., midway; g. c., midway; c., 5th rib.	General.....	H. at costal margin.	Not palpable.	H. 85; r. c. 110.	None.	80 40	30, M.	
54	U. c., midway; g. c., midway; c., 5th rib.	Pyloric.....		R. disloc., but not movable	H. 75; r. c. 100.	"	54 0	39, F.	Ten chil'n; hepatoptosis; operation; hepatoplexy.
55	U. c., umbilicus; g. c., pubis; c., 5th rib.	General, immense		R. 3 degrees; l. 3 degrees.		5 cm.		50, F.	Hepatoptosis and splenoptosis.
56	U. c., $\frac{1}{2}$ position; g. c., midway; c., 6th rib.	Pyloric.....					48 26	35, F.	One child; hepatoptosis; operation; gastropexy.
57	U. c., umbilicus; g. c., midway; c., 6th rib.	"		R. 1 degree	H. 82; r. c. 80.		22 0	27, F.	One child.
58	U. c., umbilicus; g. c., midway; c., 5th inter.	"		"	H. 90.	Slight..	35 15	35, F.	Four children.
59	U. c., midway; g. c., midway; c., 6th interspace.	"		Not palpable..		None.	80 35	27, F.	
60	U. c., midway; g. c., midway; c., 6th rib.	"		R. 1 degree; l. 1 degree.		Slight..		35, F.	Four children.
61	U. c., $\frac{1}{2}$ position; g. c., midway; c., 5th rib.	"	H. at level of umb.	R. 3 degrees.	H. 80; r. c. 102.	None.		27, F.	
62	U. c., midway; g. c., midway; c., 5th rib.	"	H. 2 cm. above umb.	Not palpable..	H. 90; r. c. 102.	Slight..		43, F.	One child.
63	U. c., $\frac{1}{2}$ position; g. c., midway; c., 5th inter.	"	H. at level of umb.	R. 2 degrees.	H. 80; r. c. 82.	None.	5 0	58, F.	
64	U. c., midway; g. c., midway; c., 7th rib.	"		R. 2 degrees.	H. 96.	"	40 14	50, M.	
65	U. c., $\frac{1}{2}$ position; g. c., midway; c., 6th inter.	"	H. at level of umb.	Not palpable..	H. 90.	"	35 16	45, M.	
66	U. c., $\frac{1}{2}$ position; g. c., midway; c., 6th rib.	"	H. at costal margin.	R. 2 degrees; l. 2 degrees.		"		60, F.	
67	U. c., $\frac{1}{2}$ position; g. c., midway; c., 6th inter.	"		R. 3 degrees; l. 2 degrees.		"		37, F.	
68	U. c., midway; g. c., midway; c., 6th interspace.	"		Not palpable..		"	75 47	23, M.	
69	U. c., midway; g. c., midway; c., 5th rib.	"		R. 1 degree		"		31, F.	
70	U. c., midway; g. c., midway; c., 5th rib.	General.....	H. at costal margin.	Not palpable..	H. 95; r. c. 92.	"	110 40	50, M.	Ulcer of lesser curvature found at operation; hepatoptosis.

considerable difficulty. We have examined the colon by inflation with air in thirty-six cases of our series. While we regard air inflation through the rectum as the best of the different methods so far devised, it is only in certain cases that a very definite idea can be obtained of the position of the large intestines. Unless the abdominal wall is thick or very rigid the sigmoid flexure, the transverse colon and the cecum may be seen and palpated when the bowel is inflated with air. In each percussion has been employed to confirm the results of inspection and palpation.

From the study of these cases the authors are of the opinion that in gastroptosis the transverse colon always shares in the downward displacement, and when filled with air occupies a position immediately below and in contact with the greater curvature.

The more difficult question is in regard to the hepatic and splenic flexures. The theory of Virchow and Glendard, that the hepatic flexure descends first, dragging after it the right half of the transverse colon, while the splenic flexure remains in place, is as difficult to substantiate as to disprove. The hepatic flexure lies more deeply than the transverse colon or the cecum, and while its upper limit is apparently fairly well defined by the upper limit of the tympany elicited in the right flank after inflation, we can not but feel that there is considerable room for error.

The splenic flexure lies behind the greater curvature and cardiac end of the stomach and eludes satisfactory demonstration. The accompanying Fig. 1, after Quain, shows the normal position of the colon, while in Fig. 3 the hepatic flexure is in a fairly normal position, and Fig. 4 illustrates the extreme limit of displacement observed in our cases. In our series we usually found downward displacement of the hepatic flexure, while the splenic flexure was lost on the opposite side of the abdomen usually 3 to 5 centimeters below the umbilicus, where it passed behind the greater curvature. In several cases the hepatic flexure was plainly as high as the costal margin. We believe that both the bowel and

stomach, when inflated, tend to assume a higher position than when empty and relaxed. Thus, in Cases 25 and 56, where the position of the viscera was determined at operation, the transverse colon lay fully a hand's breadth below the greater curvature, while the flexures were well above the umbilicus—although in all of our cases the colon, when inflated, followed closely the lower border of the stomach. It may well be that in many of such displacements the undistended transverse colon sinks much lower than the stomach, but when filled with air rides upward as well as forward to the abdominal wall and comes in contact with the greater curvature.

In Case 70 operation showed that the lesser curvature was midway between the umbilicus and pubis, although inflation indicated that the stomach occupied almost all of the epigastrium.

POSITION OF KIDNEYS, LIVER AND SPLEEN.

In our examination of the kidneys we have employed the bimanual method, in which the patient lies on the back with the thighs flexed on the abdomen and with the abdominal wall as relaxed as possible. One hand is placed over the lumbar region and the other is passed down, as far as possible, under the margin of the ribs. Palpation is made during both forced respiration and when the abdomen is in repose. In describing the degree of displacement we have adopted the following nomenclature. When the lower edge can be felt on deep palpation the kidney is said to be movable in the first degree. The term second degree is used when during a forced inspiration the finger tips can be slipped above the upper pole of the organ, but it can not be brought below the level of the navel. When the kidney can be pushed freely about in its own half of the abdomen, or even beyond the median line, the term third degree is applied. In 39 out of 64 cases, or 60.9 per cent., the right kidney could be palpated. In 18 of these it was barely palpable, in 12 it was movable in the second degree, and 9 cases were movable in the third. Both kidneys were movable in 4 cases. Ptc liver occurred 3 times and of

MOVABILITY AND PTOSIS OF KIDNEYS, LIVER AND SPLEEN.

Right Kidney Alone Movable.

Females: First degree	15
Second degree	10
Third degree	7
Males: First degree	2
Second degree	1
Total	35

Both Kidneys Movable.

Both first degree	1
Both second degree	1
Right third, left, second degree	1
Both third degree	1
Total	4

Total cases gastroptosis with ptosis of kidneys.. 39, or 60.9 p. c.

Total cases gastroptosis with ptosis of liver..... 4, or 5 p. c.

Total cases gastroptosis with ptosis of spleen.... 1, or 0.7 p. c.

CASE 54.—Operation showed a much enlarged liver, which was displaced downward and was abnormally movable. Gastroptosis and movable right kidney.

CASE 55.—There was great movability and displacement of both kidneys (third degree), liver and spleen.

CASE 56.—Operation showed that the liver was unduly movable and displaced downward.

CASE 70.—Operation showed a floating liver. Gastric ulcer of the lesser curvature.

Thus in 3 of 6 cases operated on the liver was unduly movable and sagging downward. As this is 50 per cent. of the cases operated on the idea strongly suggested itself that ptosis of the liver may elude our methods of physical examination and be more frequent than has been supposed.

NEURASTHENIA.

This associated taint which has played so conspicuous a rôle as to give rise to the theory of Charcot and Bouvert, that it was the cause of gastroptosis, was not very infrequent in our series. The tendency of later observers seems to be to place very little weight on neurasthenia as the primary cause of abdominal ptosis. In 48 cases it was present in 22, or 45.8 per cent. The difficulty in obtaining accurate data as to the presence or absence of neurasthenia in dispensary practice is considerable. While it may be present in the same degree in the class of patients who present themselves at our dispensaries as in those seen in private practice, it is certain that its manifestations are not so pronounced as in those more well to do and highly strung. It should also be borne in mind that in a brief acquaintance with a walking patient it is not always easy to make a diagnosis of neurasthenia.

In cases of gastroptosis suffering with various functional disorders of the nervous system, a distinction must be made between these symptoms and true neurasthenia. The fact that gastroptosis does occur in a large proportion of cases without neurasthenia disproves the theory that the two are interdependent. It is much more likely that when they coexist they are merely concurrent manifestation of some constitutional weakness, be it congenital or acquired.

ANALYSIS OF THE GASTRIC CONTENTS.

The condition of the gastric contents after the ingestion of an Ewald test meal was most frequently one of hypoacidity. A certain proportion were approximately normal and hyperacidity appears to be uncommon. Free hydrochloric acid was absent in 13 cases of 45 examined, or 29 per cent., and in 17 cases the free HCl was 10 or under. Thus in 66 per cent. the amount of free HCl was subnormal. In 9 cases the acid was approximately normal in amount. All of these were well-marked examples of the condition and of considerable

duration. The figures given are in terms of decinormal soda hydroxid solution.

Six cases showed hyperacidity. Of these Case 59, a young woman, and Case 68, a man aged 45, were instances of primary gastroptosis with a strong neurotic tendency. Cases 22, 35 and 53 were men in early adult life, all decidedly neurasthenic with downward displacement of the pylorus and a considerable degree of general dilatation. In Case 70 (a man aged 50) operation revealed a gastric ulcer. This was the only case with symptoms of organic lesion of the stomach. It will be seen that but two of the six cases with excess of hydrochloric acid were instances of primary gastroptosis.

TABLE OF HYDROCHLORIC ACID.

Free HCl absent.....	13; average total acidity, 16
Free HCl 10 and under....	17; average total acidity, 52
Free HCl 11 to 25.....	9; average total acidity, 47
Free HCl above 25	6; average total acidity, 80

SYMPTOMS.

In those cases in which the dilation affected the pyloric extremity alone the subjective symptoms were those of motor insufficiency of a mild grade. Evidence of fermentation, as manifested by gaseous eructation, coming on an hour or so after meals, were observed in every case. Some degree of autointoxication was almost as constantly present. Attacks of frontal headache, accompanied by nausea following fatigue or indiscretions in diet and which were relieved by treatment directed to the stomach, occurred in 20 per cent. Pain in the epigastrium or upper abdomen was complained of in 50 per cent. Its character varied, but was most often described as dragging, and was most intense an hour or so after meals. Pain in the lumbar region was present in 25 per cent., vomiting in 16 per cent., and nausea in 12 per cent. Constipation was the rule and was decided in character in 60 per cent. A small proportion of the rest suffered from alternating diarrhea and constipation, and in one or two diarrhea alone occurred, which was relieved by lavage and by medicinal measures directed to control the fermentation.

In the cases of general dilatation with gastroptosis, the signs of impairment of motor power were much more pronounced, and it was here that the only instances of decided retention occurred. Two of the cases of vomiting were in men with marked general dilatation. Evidences of autointoxication were much more intense in this class of patients.

It has seemed to us that in these cases displacement of the stomach was the dominant factor in the production of subjective symptoms. Signs of intestinal disturbance were not intense in any of our cases. The constipation and diarrhea were moderate and easily controlled. With the exception of those cases in which the kidney was floating the dislocation and movability of that organ did not give physical discomfort.

A floating tenth rib, the stigma described by Stiller, was noted in only two of our series.

THE SPLASHING SOUND.

Our experience with this sign, if properly used and elicited, is that it is of value in determining a decrease in power of the stomach muscle, when obtained during the period of digestion; and of motor insufficiency when obtained at a period when the stomach should have emptied itself into the duodenum. In studying the relations of the splashing sound to atony, the patient should be under observation for a longer time than a dispensary service allows, consequently we have not been able to obtain data of any value in this connection.

THE URINE.

The urine was negative so far as routine examination is concerned. The average specific gravity was not above normal, arguing against any considerable degree of concentration as seen in severe cases of gastric motor insufficiency.

SEPARATION OF THE RECTI ABDOMINALIS.

This important sign, described by Webster, was noted in 17 of 46 cases examined for it, i. e., in 37 per cent. The amount of separation varied considerably, in some instances being only sufficient to admit the finger tips, in others the width of three or even four fingers. The cases in which the condition was observed were all females, of whom 11 had borne children and 6 were nulliparous.

The following case is of interest since it emphasizes the difficulty of arriving at any definite conclusion as to the etiology of abdominal ptosis.

R. H. Female. 35 years of age. White. Has born 13 children. Presents such diastasis of the recti muscles that the whole fist can be inserted between them in the umbilical region. In spite of this very decided relaxation of her abdominal walls, inflation showed that her stomach was in its normal position. Her right kidney was movable in the second degree.

CONDITION OF THE BLOOD.

Meinert, in his original paper, held that chlorosis was the cause of gastroptosis, but his views were refuted by Kelling, who showed that the two conditions had no direct etiologic connection. Our series bears out this conclusion, for only one of our cases suffered with chlorosis, while in the greater portion of the remaining the blood was normal, and the rest showed but a slight secondary anemia. The high color index in the following table speaks for itself in excluding chlorosis.

COLOR INDEX OF THE BLOOD.

Hemoglobin, 85 p. c. or over 24.	Average color index, 0.95
Hemoglobin, 60 p. c. to 84 p. c. 20.	Average color index, 0.9
Hemoglobin, 35 p. c. 1.	Average color index, 0.5

TREATMENT.

Discussion of methods of treatment would be out of place in a paper of this character. The experience, however, obtained in the observation of the series reported has impressed us with several facts that seem worthy of mention. Relief from symptoms of motor insufficiency may often be obtained by mechanical support of the pylorus. This statement applies as well to cases of general as to those of pyloric dilatation.

Systematic lavage is not indicated when mechanical support is applied, provided there is not decided retention or great alteration in function of the gastric mucous membrane. We have found it of advantage only (1) in cases of extreme atony and general dilatation with much retention, and (2) in cases in which, without dilatation, there is an excessive secretion of mucus.

Six of our cases have been operated on. The results will be reported in detail by the gentlemen who performed the operations. It may be permitted us to make brief mention of the character of the procedure in each case:

CASE 25.—Ventral suspension of the uterus, approximation of the recti muscles in the lower half of the abdomen, nephrorrhaphy.

CASE 54.—Suspension of the liver.

CASE 56.—Shortening of the gastro-hepatic omentum. (Beyea's operation.)

CASE 49.—Nephrorrhaphy, stitching the pylorus to the hilum of the liver.

CASE 52.—Stitching the pylorus to the hilum of the liver.

CASE 70.—Excision of gastric ulcer.

CONDITION, AGE AND SEX.

In our series there were 52 women (70.4 per cent.) and 18 men (30.6 per cent.). Twenty-one of the women had borne children. It will be seen that 59 per cent. of the women were nulliparous. Very few of our dispensary cases are under 20 years of age. Consequently we have been unable to determine whether gastroptosis is frequent in childhood as claimed by Meinert. A great majority of our series came under observation while in the third, fourth and fifth decade. The youngest patient was a girl of 18 years, the oldest a man of 71.

TABLE OF AGES BY DECADES.

Under 20	1	51 to 60	3
20 to 30	24	61 to 70	1
31 to 40	18	Over 70	1
41 to 50	21		

CONCLUSIONS.

1. Gastroptosis is much more common than might be inferred from the meager reference made to it in a majority of the text-books on general medicine. In women showing symptoms of gastric atony its presence is almost constant. It is much less frequent in men.

2. The occurrence of gastroptosis is not confined to any particular age or class of individuals. There are no causative factors common to all cases, and no explanation of its etiology heretofore given is broad enough to be wholly satisfactory, if we except the theory of congenital predisposition, which is entirely hypothetical.

3. The position assumed by the stomach in all of our cases was vertical or subvertical. Total descent was not observed and probably is extremely rare. Some dilatation of the pyloric extremity was always present. When this dilatation affects the pyloric end alone it may perhaps safely be assumed that the dilatation is secondary to the descent of the pylorus. In general dilatation and gastroptosis it is probable that the displacement is secondary to the dilatation. The data in regard to the position of the stomach were obtained in every case by inflation with air through the stomach tube. The colon was inflated through the rectum.

4. The transverse colon invariably shared in the displacement, assumed the M or V shape, and when inflated by air was in close contact with the greater curvature of the stomach. The hepatic flexure may not be displaced or may sink to the level of the umbilicus. The splenic flexure lies behind the stomach and eludes demonstration.

5. The right kidney was movable in 60.9 per cent. of the cases. The left kidney rarely showed abnormal movability and the spleen in but one case. The fact that the liver was observed to be unduly movable and sagging downward in three of six cases operated on suggests that ptosis of this organ may elude our methods of physical examination and be more frequent than is usually supposed.

6. There is no condition of the gastric contents peculiar to gastroptosis. Absence or diminution of the free HCl is the rule. In a few cases the amount was normal. Hyperacidity was rare and usually occurred in cases where general dilatation existed, and when there was a strong neurotic taint.

7. There were no characteristic changes in the blood or urine.

8. The subjective symptoms were those of gastric motor insufficiency, and were of a mild grade in cases of primary ptosis, but more severe where general dilatation existed. Pain was present in the upper abdominal region in about half and in the lumbar region in a quarter of the cases.

9. The same causes that produce neurasthenia appear to favor the development of ptosis of the abdominal viscera. When the two conditions are established they probably react on each other deleteriously, but clinical evidence tends to contradict the theory previously widespread that they have a direct causative relation.

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DISCUSSION.

DR. ALLEN A. JONES, Buffalo—This matter of gastroptosis is a very important one and has been very ably presented this afternoon. It has been my firm belief that many cases of this affection commence in early life, occurring particularly in those nervous, highly organized, restless children, with narrow thoraces, whose stomachs are filled most all the time, never empty except for one or two hours before breakfast. I speak here of the etiology of gastroptosis because our knowledge of it is so inadequate. In addition to the symptoms mentioned by Dr. Steele there are the circulatory ones, such as coldness of the hands, dizziness, vertigo, cerebral anemia and, as already pointed out, such disturbances as are due to disturbed circulation in the splanchnic area. In a paper read one year ago, but which I failed to publish, my conclusions were the same as others have given regarding the stomach in gastroptosis, that there is a delayed passage of food into the duodenum which is sometimes serious and leads to a dilatation. This dilatation occurs particularly toward the pyloric end of the stomach. Robinson of Chicago, not long ago, published a paper on this subject presenting the results of his studies and he made the statement that dilatation of the stomach in vicerptosis was due to the fact that the sheath of the superior mesenteric artery passing down over the duodenum made pressure on the duodenum and so caused a difficult onward passage of its contents causing dilatation of the stomach and duodenum. The results of a gastro-jejunostomy were admirable. In the consideration of enteroptosis the question of intra-abdominal pressure is important.

DR. CHARLES G. STOCKTON, Buffalo—I believe that this condition of splanchnoptosis is more common than is generally supposed, and that it plays a part in the production of the neurasthenia that we so often see in the lymphatic type of women. Dr. Steele is to be congratulated on the good results he has obtained by surgical methods. Splanchnoptosis is a disease peculiar to those who walk in the upright position, and is a disturbance to which quadrupeds are not subject. It is true that the visceral displacements in the abdomen are not, as a rule, dependent on contraction of scar tissue, nor from the unusual weight of the stomach and other organs, although such conditions do occasionally have an unfavorable effect. As a rule, splanchnoptosis develops in those who have unusually fragile tissues which are lacking in inherent strength. Surgeons have found, in attempting to produce fixation of displaced organs, that there is difficulty in finding a sufficiency of strong tissue through which sutures may be placed.

DR. BOARDMAN REED, Philadelphia—I wish to emphasize the great importance of making a correct diagnosis of this condition, for I am sure that it occurs in the practice of nearly every physician. Physicians should make a more careful examination of their patients in cases of obstinate constipation, neurasthenic disease, etc. As to the etiology of the trouble, it seems to me that not enough emphasis has been placed on the matter of dress. Dr. Jones has stated that he believes a great many of these instances arise in infancy; I have reached the same conclusion, for I have found the stomach as low as the umbilicus or lower in many young children. In women I frequently find the stomach as low down as it can go—in the pelvis, resting on the pelvic organs. The dress of women, especially the corset, favors the sinking of the stomach lower and lower, besides weakening the abdominal muscles by preventing exercise of them.

DR. FENTON B. TURCK, Chicago—There are several factors which may predispose to gastroptosis, and among them are the congenital conditions which Rosengert regards as reversion type, congenital deformity. There are certain predisposing factors which are more important than have been referred to to-day. I would especially emphasize the errors of living and disregard for personal hygiene early in life. The chief condition found associated is an atony of the stomach and a resulting toxemia. I have found that the filtered stomach contents withdrawn from the stomach in cases of gastroptosis with atony, when injected into animals, would show a greatly increased toxicity over normal stomach contents. The increase in the toxicity of the gastric contents is an important diagnos-

tic indication of the lack of motor power. The resulting increase of bacterial growth which causes the formation of toxins in the stomach is responsible for many of the symptoms. The abdominal belt does not lift the stomach at all, as has been shown by a careful examination with the gyromele in connection with the x-rays. The skiagraph shows no change in location of the stomach when taken before and after the adjustment of the belt. The improved condition after the application of the abdominal support is due to the increase in the intra-abdominal pressure which increases the blood pressure, overcoming the splanchnic congestion. This also benefits the tone of the gastrointestinal musculature. Dietetic treatment, rest in bed and appropriate abdominal exercises are of the highest therapeutic value in connection with other treatment which I shall soon refer to. The benefits of operations in these cases may be largely due to the prolonged rest in bed which follows the operation, something like the Mitchell rest-cure treatment. The indications for treatment are not simply mechanical, but call for an increase in the tone of the muscular contractions so as to favor the ready passage of food through the pyloric orifice of the stomach. If the pyloric orifice is narrowed, causing obstruction, gastroenterostomy is indicated. I would emphasize the fact that we should endeavor to improve the splanchnic circulation, distribution of blood to the surface of the body. An increased elimination will result. If we should find that by the abdominal displacement there resulted kinking of the duodenum and obstruction, then I think an operation is rational. The most frequent pathologic condition in these cases of gastroptosis is lack of motor power of the stomach, due to atony, and if a dilatation occurs, it is usually a result of the atony. The low blood pressure, cold hands and feet, showing peripheral contraction of the arterioles, accounts for many of the neurasthenic symptoms, but we must admit that neurasthenia may act as a cause of gastroptosis, as well as the result. It is a significant fact that when atony of the stomach is overcome, and the disturbance of circulation restored, the neurasthenic symptoms disappear. Disturbance of the splanchnic circulation is undoubtedly an important factor in the production, as well as the result of gastroptosis. So long as this condition exists, it interferes with the nutrition, and the lax condition resulting favors the downward displacement. The indications for treatment of gastroptosis, then, are: 1, increase the peristaltic activity of the stomach. This prevents the toxic condition; 2, restore the splanchnic circulation by reducing the congestion of the abdominal vessels; 3, increase the strength of the abdominal walls. This is accomplished chiefly by suitable abdominal exercises; 4, operation. In some cases this may be the only plan that can be adopted with any chance of success. The use of pneumatic gymnastics of the stomach, as employed in Chicago, I think of great value. In stomach gymnastics it has been found that when compressed air is introduced into the stomach through a tube and then allowed to escape (repeating this several times in succession) it causes a compensatory hypertrophy of the muscular walls of the stomach. Air distends the organ uniformly in all directions. It is compressible, and, while it stretches the stomach walls, it permits contraction of the stomach muscles, isometric contractions resulting. Peristalsis is increased by this method without fatigue. The air can be heated before it is introduced by passing it through water at a temperature of 55 C. (131 F.). It passes through the afferent canal of the double tube, distends the entire stomach, the circulation is stimulated by the heat and the air passes out through the efferent canal of the double tube. As a supplementary method of exercise to the abdominal viscera, I have found my exerciser of great benefit. This is an extension exercise for the abdominal muscles. The very best abdominal support is strong abdominal muscles.

DR. FRANK BILLINGS, Chicago—There is no doubt that many cases of ptosis of the stomach and colon are congenital. As time goes on more cases are found on account of the dress of woman, and more cases are seen in women than in men. In many cases of the disease, until something of a general kind occurs, such as a neurasthenia, the patients do not feel anything abnormal. The point that I wish to make is that the

neurasthenia is primary, in many cases producing general myasthenia. Not until the muscular power of the stomach fails, from general causes, does the patient suffer.

Dr. J. DUTTON STEELE, Philadelphia—I agree with everything that has been stated with regard to the etiology. I can not take issue with what Dr. Turk has stated for I have never been able to see how gastric motor insufficiency from gastroparesis is different from an insufficiency from any other cause. I think it is very important that every physician should outline the stomach in all patients who come to him with symptoms of such a condition. It may influence the kind of treatment employed.

THE PURSE-STRING SUTURE IN GASTRORRHAPHY FOR GUNSHOT WOUNDS.—AN EXPERIMENTAL CONTRIBUTION.*

N. SENN, M.D., PH.D., LL.D., C.M.

Professor of Surgery, Rush Medical College, in Affiliation with the University of Chicago.

CHICAGO.

One of the important elements of success in the treatment of gunshot and stab wounds of the stomach is time. Unnecessary time lost in finding and suturing the visceral wounds is a source of immediate danger to life which should be eliminated as far as possible by means which enable the surgeon to make a quick and correct diagnosis and by resorting to a method of suturing which closes the wound safely and securely with the least possible delay and which leaves it in a condition most favorable for speedy definitive healing. It is well known that small penetrating wounds of the stomach often heal without operative intervention. By contraction and relative displacement of the different muscular layers of the thick wall of the stomach the tubular wound is contracted and obstructed sufficiently to prevent leakage until the canal on the peritoneal side becomes hermetically sealed by firm plastic adhesives which prevent extravasation during the time required for the repair of the visceral wound. If in larger wounds of the stomach the same degree of occlusion can be accomplished by the simplest mechanical means then such a procedure should take the place of the more time-consuming methods of suturing now in general use. This can be accomplished with the purse-string suture. (To Dr. Dawbarn of New York belongs the credit of having first suggested the use of the purse-string suture in the treatment of small perforations of the gastrointestinal canal.)

In gunshot injuries the defect in the stomach wall is circular, the wound margins contused, hence the deep sutures could at best furnish a barrier to the escape of stomach contents only for a short time, as their hold in the necrosed tissues would be imperfect and only of brief duration. In small, round wounds the circular suture is the one which will bring and hold together in permanent, uninterrupted contact the serous surfaces in the most efficient manner. In the treatment of gunshot wounds of the stomach the principal object of suturing should be to close the perforation in such a way as to guard securely against extravasation and at the same time approximate and hold in apposition a maximum surface of intact healthy peritoneum. This is accomplished by making a cone of the injured part of the stomach with the apex corresponding with the wound directed toward the lumen of the organ. The purse-string suture applied in a manner that will be described in the experimental part of this paper, will maintain this cone until the healing of the visceral

wound has advanced sufficiently to render further mechanical support superfluous. The cone on the mucous side of the stomach acts in the manner of a valve, which in itself is an effective barrier against the escape of stomach contents, while the circular suture constitutes almost an absolute safeguard against leakage and brings in contact the serous surfaces in the interior of the cone. For wounds of the posterior wall of the stomach I recommend a purse-string suture of heavy durable catgut to be applied through the anterior wound. The anterior wound is closed with a purse-string suture of silk of medium size applied to the base of the cone on the serous side. It is desirable that the circular suture should cause no necrosis of the included tissues. By using an absorbable suture in closing the posterior wound in the interior of the stomach this object is gained, as only a small part of the thickness of the stomach wall is subjected to pressure, and the tension caused by the ligature is gradually lessened by softening of its material and is entirely removed by the absorption and digestion of the ligature in less than three weeks.

The wound of the posterior wall of the stomach is

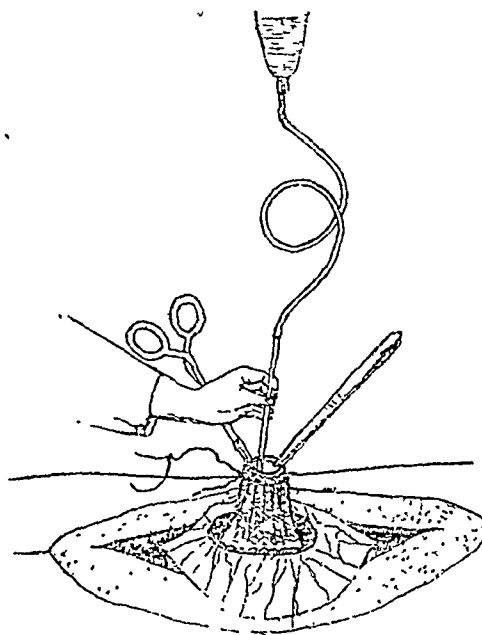


Fig. 1.—Case 4. Showing irrigation of bursa omentalis through the opening in the posterior wall of the stomach.

found and made accessible by inserting through the anterior wound a grasping forceps with which the posterior wall is seized at a point where, from the course of the bullet, the second wound is supposed to be located. Through a wound large enough to admit the index finger the greater part of the posterior wall of the stomach can be made accessible to sight and touch, and the perforation can be located and closed with the purse-string suture in a few moments. In doubtful cases inflation of the stomach should invariably be practiced for the detection of a second and possibly a third perforation.

EXPERIMENTS.

The following experiments were made for the purpose of demonstrating the practical utility of the purse-string suture in the treatment of perforating wounds of the stomach.

CASE 1.—Dec. 23, 1901, a white and brown medium-sized male dog was chloroformed and through a median incision three inches in length the anterior surface of the stomach was exposed and brought forward into the wound. A vertical visceral incision was made an inch in length about one inch above the curvature and half-way between the cardiac and

* Presented to the Surgical Section of the British Medical Association Manchester, July 30, 1902

pyloric ends. Through this opening the posterior wall was seized with a forceps and drawn into the wound in the form of a cone. Around the base of this cone a purse-string catgut No. 3 ligature was applied, taking four seizures which included all the tunics except the peritoneum. The apex of the cone was then amputated, making a perforation large enough to insert the tip of the little finger. The anterior wound was next closed by taking five seizures half an inch from the wound margins with a needle armed with medium-sized silk which included all of the coats except the mucous membrane. Before the circular suture was tied the margins of the wound were deeply inverted in order to secure apposition of large serous surfaces. The abdominal incision was closed with four deep silk sutures and three superficial sutures of fine silk and the wound sealed with collodion. The dog was fed as usual,

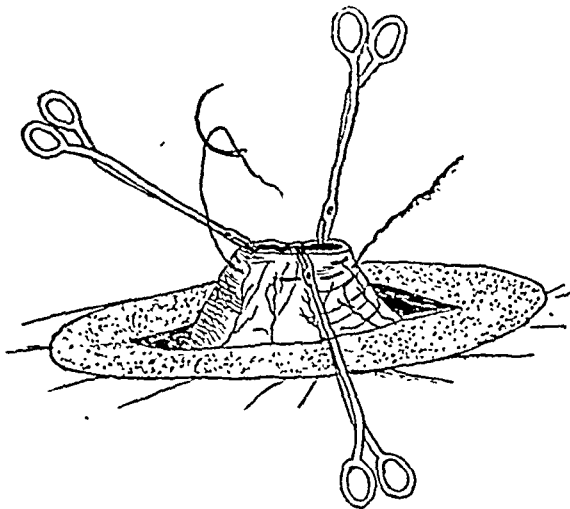


Fig. 2.—Case 4 Purse-string silk suture in place

took his food with a relish and at no time manifested any untoward symptoms.

Postmortem.—The dog was killed five days later, when the following conditions were found: External wound firmly united, no peritonitis. Anterior wound of stomach healed, a narrow strip of omentum adherent over the encysted silk purse-string suture. Posterior wall of stomach free and wound healed. On opening the stomach small granulating points indicated the location of the wounds.

CASE 2.—Small brown poodle dog. Operation the same as in the preceding case only with this difference, that the wound in the posterior wall made by the circular excision was large

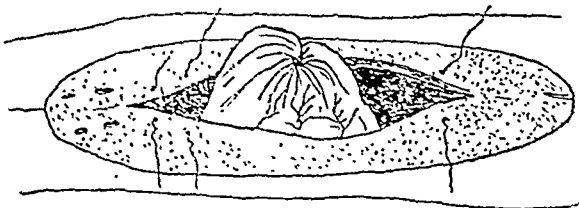


Fig. 3.—Showing result of purse string silk suture closing anterior wound in stomach wall.

enough to insert three fingers; consequently, more seizures were made in applying the catgut purse-string suture, and the ligature was applied after the wound was made. Before tying the ligature the peritoneum of the wound margin was seized with forceps at two opposite points and traction made so as to include as much as possible of it in the grasp of the circular suture. In applying the anterior suture the seizures, four in number, were taken three-quarters of an inch from the margins of the visceral incision and with forceps the peritoneum was pushed as far as possible in the direction of the cavity of the stomach with the same object in view. The dog recovered without any untoward symptoms notwithstanding he was fed on the coarsest kind of food from the time of operation until he was killed, twenty days later.

Postmortem.—External wound firmly united. Firm adhesion over a point corresponding with the location of the underlying encysted silk suture. Posterior wound healed perfectly without any external adhesions. The stomach was removed and opened at the lesser curvature. The mucous membrane over the entire surface of the stomach was normal and it was exceedingly difficult to locate the minute scars in its folds. The catgut ligature had disappeared and the cone was reduced to the level of the surrounding mucous membrane. The silk ligature was firmly encapsulated.

CASE 3.—Small black bitch. Anterior and posterior wounds were made before the ligatures were applied. The external incision was closed by six deep silk sutures and sealed as usual with collodion. The experiment was made January 3 and the dog killed on the 31st with chloroform.

Postmortem.—Anterior surface of the stomach smooth and only a very circumscribed omental adhesion over the silk suture. The stomach was removed and no mark could be discovered on the posterior surface to indicate the location of the perforation. On opening the stomach the exact location of the anterior wound could only be determined by a circumscribed thickening of the wall, covered by normal mucous membrane, which was thrown into radiate minute folds the center of which corresponded with the exact location of the wound. The posterior wound healed in the same ideal manner.

CASE 4.—Small brown male dog. In this experiment the feasibility of flushing the retrogastric space was demonstrated after making wounds in the anterior and posterior walls of the stomach as large as wounds inflicted by large-caliber bullets. The nozzle of the irrigator was firmly fixed in the posterior wound by tying the purse-string in the form of a loop over it (as shown in the illustration). After the irrigation the nozzle was removed and the suture tied in the usual manner. Anterior wound closed with circular silk suture. The dog was killed four weeks later.

Postmortem.—Findings the same as in the preceding experiment.

REMARKS.

The above experiments demonstrate the safety of the circular suture in the treatment of gunshot and other penetrating wounds of the stomach. All of the animals operated on in this manner recovered, and the repair of the injuries as shown by the specimens was ideal. The absence of adhesions over the posterior wound and their constant presence over the anterior wound indicate that the presence of the silk ligature and the needle punctures were the causes of the circumscribed plastic peritonitis which produced them. In none of the specimens could any indications be found of necrosis of any of the inverted tissues and included in part by the circular suture.

In the course of three weeks the continuity of the mucosa at the seat of the injury was completely restored. The result of these experiments have convinced me that the circular suture compares favorably with the methods of suturing in general use and besides has the great advantages over them in the ease of its application and the saving of much valuable time.

Suturing of the posterior wound by partial eversion of the stomach through the anterior obviates unnecessary handling of the organ, and the necessity of interfering with the vascular supply incident to exposure of the posterior wound as is done by the methods now generally practiced. If extravasation into the lesser peritoneal cavity has taken place, flushing through the posterior wound and a vertical slit in the gastrocolic ligament and gauze drainage through the latter are invariably indicated.

When a urinary antiseptic is needed try lithium benzoate. It is eliminated through the kidneys, increases the flow of urine and sedates the urinary tract.

THE PURPOSES OF URETER-CATHETERISM— PRESENTATION OF URETER-CYSTOSCOPE FOR MALE AND FEMALE.*

BRANSFORD LEWIS, M.D.

Professor of Genito-Urinary Surgery, Marlon-Sims-Beaumont Medical College; Genito-Urinary Surgeon to Rebekah Hospital, to City Hospital, Female Hospital, etc.

ST. LOUIS.

The purposes of ureter-catheterism in connection with the cystoscope are twofold: For diagnosis and for treatment.

DIAGNOSIS.

A. To locate the origin of pus, blood, tubercular products or bacilli, the various pyogenic infections, abnormally desquamated epithelium, etc., as to whether they come from (a) the bladder, (b) the right ureter, (c) the left ureter, (d) the right kidney (e) the left kidney, (f) the right or (g) the left peri-renal space and communicating with the corresponding kidney or ureter.

B. To recognize and locate obstructive conditions in the right or left ureter, from (a) stricture, (b) stone, (c) adjacent tumors, (d) bend or kink in the ureter from movable or dislocated kidney, (e) valvular junction of ureter and pelvis.

C. To determine (a) the presence of two kidneys, (b) if only one, which is absent.

D. To determine the number of ureters present.

E. To determine the functional activity of each kidney separately and relatively, with respect to its excretion of urea, albumin, quantity of urine, the specific gravity, etc.

F. To determine the size and capacity of each kidney-pelvis, with respect to (a) hydronephrosis, (b) pyonephrosis, (c) total obliteration of secreting kidney tissue.

G. If there be kidney disease present, to determine (a) if only one kidney is affected or both, (b) if only one, which is the affected one, (c) if both, which is the one more affected, (d) if removal of the worse one be advisable, is the other able to carry on kidney function sufficiently; (e) if removal of one be advisable, and the other is capable of supporting life, will the operation remove the infection from the body, removing possibility of dissemination or recontamination?

TREATMENT.

A. To enlarge narrowings or strictures at (a) the ureter openings, or (b) in the channel of the ureters. By facilitating drainage through the increased ureter caliber, thus obtained, to assist in the improvement of pyelitis, or pyonephrosis, unilateral or bilateral.

B. To irrigate and medicate (a) the ureters; (b) the kidney pelvis of one or both sides.

C. To assist, by anesthetizing and enlarging the ureter opening, the passage through it of a calculus or a plug of pus, blood, etc.

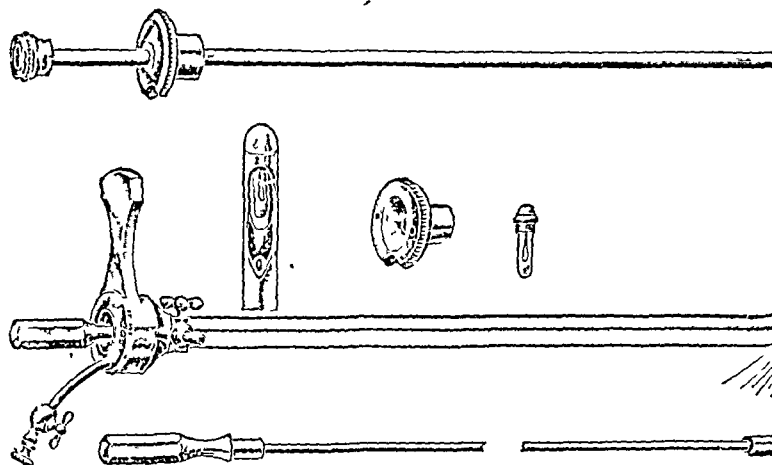
To accomplish the purposes above described one must have an instrument that effects ureter catheterization easily and quickly without causing trouble to the patient or bad after-effects. I believe I have accomplished this result in the ureter-cystoscopes for male and female which I herewith present. The instrument consists, as you see, of a straight tube through which one looks directly at the object without the intervention of lenses and without the accompaniments of refraction, absorption of light, etc. The illumination is made by a cold electric lamp, which allows the use of the cystoscope

in the bladder without introducing water and without burning the patient. This obviates the difficulties coming from the clouding of water, since air is used for distending the bladder. Air, of course, can not be clouded by the inflowing of blood or pus in ways that destroy the transparency of a liquid vehicle.

With cocain anesthesia the process of ureter catheterization is easily accomplished in either the male or the female with this instrument. I have used it upwards of three dozen times this spring, mostly in my office, allowing the patients to get up and leave immediately afterward and go about their business.

It has enabled me to accomplish something else which I believe will be very valuable in cases of pyelitis: that is, washing out the kidney pelvis in chronic inflammation of that organ, either unilateral or bilateral. I have done it in both the male and the female in a number of instances. In three cases which were the subject of chronic unilateral pyelitis I washed out the affected kidney pelvis with marked improvement and no detriment.

The advantages in favor of ureter-catheterism as compared with segregation are very great. In the matter of diagnosis, if one uses the segregator and gets tuberculous urine, for instance, from one side, and clear urine from the other side, he is still unable to say just



where the tuberculous urine comes from—whether it comes from the bladder on that side or the ureter on that side, or the kidney pelvis on that side; whereas, if he catheterizes both ureters and gets tuberculous urine from one side, he knows that it does not come from the bladder on that side. If he runs the catheter up to the kidney pelvis he knows that it does not come from the ureter, but does come from the kidney pelvis, or kidney itself on that side. So that the segregation method is a very inferior method, in my estimation, as compared with ureter-catheterism. Of course, one can not do anything in the way of treatment of the ureters or kidney pelvis by the use of the segregator, such as he can do by the use of ureter catheterizing methods.

One case illustrating another advantage of ureter catheterizing over segregation is that in which I put the ureter catheter about four inches into the left ureter of a male patient. At first nothing drained, but on strong aspiration with a syringe I was able to pump out a teaspoonful of pure pus that was not draining through the ureter, nor would it drain through the ureter catheter except under the influence of strong aspiration. This determined, of course, that there was no drainage of urine from that kidney—that there was an infected pus sac, which proved to be the case in our cutting down into the left lumbar region and finding a collection of more than a pint of thick pus and a stone

* Read at the meeting of the Missouri State Medical Association.

in the kidney pelvis on that side. The segregator, in this case, even if it had obtained the purulent urine from the left side and clear urine from the right side, would not have made the positive indication for operation that was made by the finding of a large collection of pus by the ureter catheter.

While the instrument illustrated does not afford the ability to catheterize both ureters at the same time, I have one which does accomplish that purpose, that is, the catheterism of both ureters at the same sitting, the drainage of both ureters coincidently, allowing of comparison as to, not only the quality of urine, but the quantity as furnished by the two kidneys at the same time and under the same general influences.

627 Century Building.

THE ROLE OF SYPHILIS AS A CAUSATIVE FACTOR IN THE PRODUCTION OF PYORRHEA ALVEOLARIS.

A. H. OHMANN-DUMESNIL, M.D.
ST. LOUIS.

Pyorrhea alveolaris, variously known as Riggs' disease, Fauchard's disease, and by some other names, remains to this day a *bête noir* to dentists. This is mainly due to the fact that they can not cure it, and the best methods at their command to-day lie in prosthetic dentistry. Without desiring to pose as a carping critic, the method is bad and is surely a *petitio in forma pauperis* to him who is able to observe and to reason.

In this trouble, as well as in others, it is necessary to determine the cause and then properly treat it or eliminate it, and it is to this very question of cause that the present is written. He who has had an opportunity to observe a number of cases of syphilis has not failed to observe that a peculiar manifestation shows itself at first in connection with the lower canine teeth. This will then spread to the incisors and at times to the first bicuspids. If the examination be pushed a little farther the gum covering the tooth root will be found to be reddened and angry-looking, and if it be pressed some pain is elicited and pus is found to exude apparently from the alveolar process. This it is which has led dentists to regard it as a purulent destruction of the alveolar, because drawing the tooth did not reveal any marked alteration of the bone during the earlier period of the disease, but rather a marked collection of pus in the alveolar cavity.

As a natural consequence it was found much easier to clean out the alveolar cavities, and patients were advised to have all the affected teeth withdrawn and replaced by a bridge, which is certainly more profitable to the dentist while more inconvenient to the patient. As an example of prosthetic dentistry it is certainly a success, but as a means of cure it is anything but such. The object of this paper, however, lies without the province of stomatology, the only object being to find and determine one of the causes of pyorrhea alveolaris. I was attracted by the name at first, and endeavored to familiarize myself with the appearance of the disease. Later on, I carefully examined every case of syphilis coming under my observation, as I do now, and I noted the facility with which pus could be made to exude from the alveoli by simple pressure on the gums. This led to a further search, which led to the discovery of the same condition in individuals who were suffering from gout and other so-called dyscrasia. The inevitable conclusion would be that these general conditions were the cause of the local symptoms observed. In other words, the trouble of the alveolar process was

nothing but a local indication of some general condition which existed and which should be corrected in addition to the elimination of the local trouble which manifested itself.

It was then that a more careful examination of the teeth of syphilitics was entered into by myself, and the result was the finding of a comparatively large number of cases of pyorrhea alveolaris. Upon request a number of dentists submitted cases to me. These were very carefully questioned, and about two-thirds gave a history of syphilis. A sufficient number existed to classify them as cases of syphilis *ignorée*, or as old cases of tertiary syphilis in which this was the only bone symptom to be observed. However this may be, the subsequent treatment showed that the etiology had been correctly established and, as a natural consequence, the treatment was successful. This, however, is not to the purpose.

In view of the fact that the few observations made by the writer have shown a greater or less interdependence between syphilis and pyorrhea alveolaris, would it not be a useful matter for every one to pay more attention to the dental trouble? To say the least, is it not a curious coincidence that Riggs' disease should be observed in so many cases of secondary syphilis as well as the late form of this period? It must also be remarked that pyorrhea alveolaris occurs as a parasymphilitic phenomenon. When we take into consideration that the teeth are observed to be all sound before syphilitic infection, and that after the disease has manifested itself it shows its presence; and, further, when systemic as well as local treatment directed to the syphilis causes both to disappear we are certainly justified in concluding that lues is a factor in the production of Riggs' disease. We are unfortunately prevented from making experimental inoculations, or the matter could be definitely settled by inoculating the pus of the pyorrhea in a subject who had never contracted syphilis. Of course, there would remain the possibility of producing nothing but a purulent infection and not a chancre.

The object of the present paper has been to call the attention of syphilologists to the point announced in the title, and observation will, beyond all doubt, lead to a number of valuable ideas and the elaboration of methods, not only for the treatment, but for the prevention as well of this most distressing disease of the teeth. It is for conservatism that we are ever striving, not for radical destruction, and there is no doubt whatever that a little care and study will enable us to save many valuable teeth which are being daily sacrificed on account of a confessed inability to successfully treat the condition known as pyorrhea alveolaris. I am sure no one will more highly appreciate a successful method than dentists, no matter how anxious they may be to construct bridges for their patients.

New Instruments.

AN IMPROVED ASEPTIC ETHERIZING INHALER.

C. FONTAINE MAURY LEIDY, M.D.
PHILADELPHIA.

This cone consists of two parts: The metallic cone, with a depression in the rim of the larger end, or base, to fit snugly over the bridge of the nose (Fig. 1, A) and a brass pretzel-shaped clamp (B) which holds the napkin or towel in position. Both parts are indestructible and can not be injured in any way by heat. The cone has two parallel indentations on either side, which hold the clamp in position as it springs into place.

Place the center of a square piece of gauze, napkin or towel over the end of the cone, allowing the loose ends to completely cover the outside surface. These ends are then tucked snugly up into the larger opening, as the fingers point in Fig.



Figure 1

1. This is done with the entire free ends, the external surface of the cone now being completely covered by the napkin or towel. The brass pretzel-shaped clamp is then inserted and pressed up toward the smaller end of the cone, until it springs



Figure 2

into place, and is clamped there by the indentations, which protrude inward as shown in Fig. 2, by the pointing fingers. This inhaler is now ready for use, exactly as seen in Fig. 2.

If the napkin or towel retains this position without support, the pretzel-shaped clamp may be entirely dispensed with. This is often the case with a heavy towel. Ether or chloroform may be used and poured into the larger opening, which fits over the face, or poured over the smaller end externally, which is covered by the one thickness, the center of the towel. Care must be taken not to force the towel too tightly into the cone, as this would prevent the entrance of air, which is regulated by placing the palm of the hand over the smaller end while the cone is over the patient's face or by placing a folded towel over this end when etherizing the patient. The cone is $3\frac{1}{2}$ inches high, base $4\frac{1}{2}$ inches by 3. The smaller end is 3 inches

by $2\frac{1}{2}$. The edges are wired with a small wire, for comfort and safety. The size is immaterial, but this size I find most useful for general work. The towel is changed within a minute's notice, should the discharges from the patient make it unfit for use. The cone can be purchased for less than one dollar, which is more reasonable than any other inhaler in the market. These points, with its durability, make it the simplest and most useful etherizing cone, especially in the clinic where many cases are anesthetized every day.

900 Pine Street.

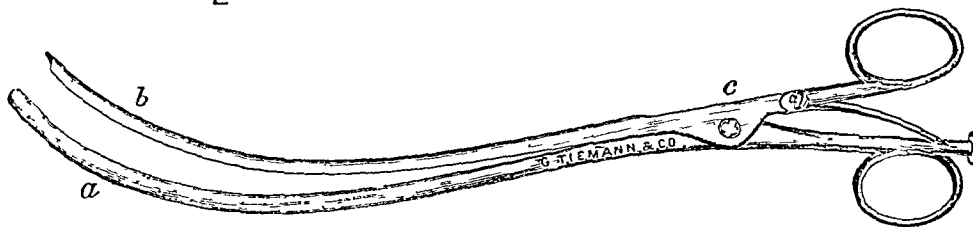
URETHRAL DILATOR AND IRRIGATOR.

WALTER E. M. RANCHOUS, M.D.

COLUMBUS, OHIO.

The instrument is composed of two blades (*a* and *b*), a spring and a set screw. The blade, *a*, is a hollow cylinder with perforations at the distal end extending two inches back. This blade when detached at *c*, can be attached to a percolator at *d*, and used for irrigating purposes. The blade *b*, or hood, is of horseshoe shape, fitting neatly over the cylindrical blade, *a*, and when attached at *c* acts as a divulsor, scissors fashion. The spring and set screw serve to hold the blades together at all times, thus making the instrument easy for introduction.

When designing the instrument, the most important use of it, in mind, was for posterior urethral dilatation and irrigation, in gonorrheal infection of the mucous membrane of that portion of the urethra. With the anatomic structure of the urethra in mind, you will see at a glance that since the prostatic portion of the urethra is of horseshoe shape, and also the widest and most dilatable part of the canal, and since the germs form colonies along the verumontanum, in the prostatic sinuses where the orifices of the prostatic ducts make their exit into the urethra, this instrument can very readily be used to dilate the canal and compress the tissues from behind forward, thus extracting the pus and germs from these ducts. At the same time a thorough irrigation can be had by causing the fluid to flow round the mouths of the ejaculatory ducts and the pectus sinus. In the constricted or membranous portion of the canal, it is also of great use in dilating and irrigating, by making pressure over Cowper's glands and along the tract of their ducts, thus enabling you to thoroughly medicate around their orifices.



I have used the instrument successfully in the above-named conditions, and in offering it to the physician I feel that if given a trial it will aid him in treating his cases of posterior urethral gonorrheal infection that cause him so much anxiety.

1273 North High Street.

Chlorosis, Marriage and Orchitic Extract.—Dr. W. Dufougeré says that chlorosis is due to a self-intoxication of menstrual origin, and to accumulation in the blood of toxic principles which are not destroyed by the internal secretion of the ovary. By re-establishing this internal secretion chlorosis is caused to disappear. Marriage influences this secretion and restores it if it has ceased. This re-establishment of the secretion is due to the absorption during coitus of a certain specific principle which acts directly on the ovary, and stimulates it out of its torpor. Chlorosis, therefore, so far from being an impediment to marriage, is quite the reverse. The ingestion of "orchitic liquid" by chlorotics will also establish this internal secretion. Its therapeutic action is explained by its physiologic character, and agrees perfectly with the effect of "marriage" on chlorosis.—Abstract from *Gazette méd. de Nantes*.

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THE NATURE OF TYPHOID FEVER.

The recent successful bacteriologic studies of the blood in typhoid fever have given us such results that some of the older conceptions of the nature of this disease must be remodeled. It appears from these investigations, of which there is now at hand a goodly number from various places, that bacilli may be cultivated from the blood in more than 80 per cent. of the cases and that the earlier in the disease the examination is made the greater the frequency of bacilli in the blood.

This perhaps at first somewhat unexpected turn of events is largely due to modifications in the technic employed. In the earlier part of the bacteriologic study of typhoid fever only small quantities of blood were used, and generally the inoculations were made directly on solid media or in small quantities of broth. Such small quantities of blood—at most a few drops—might not happen to contain viable bacilli, and in the next place it has been thought that the blood was not sufficiently diluted to interfere with or suspend the bactericidal action that it has on typhoid bacilli *in vitro*. In all the more recent work of this kind larger quantities of blood are taken directly from some vein, usually at the elbow, and mixed with large quantities of media. Liquid media have been employed by most of the workers, but others, like Schottmüller,¹ who has done a great deal of work in this line and examined in this way between one and two hundred cases, mix the blood directly with melted agar at a temperature of 45 C., which is then poured into plates. Schottmüller believes this method advantageous because it gives a clearer idea of the number of bacteria present and permits of a more ready recognition of contaminations. At the same time it would seem that the slowness with which the colonies spring up in many cases might be a disadvantage. He finds further that a dilution of the blood in the proportion of one to three is sufficient to yield colonies of bacilli when present. The puncture of veins for the purpose of withdrawing blood is not a very painful procedure and on the whole free from risk when done under usual aseptic conditions. Schottmüller has cultivated the bacilli from the blood as early as the second day of the fever, before the appearance of specific agglutinins, and on several occasions within the first twenty-four hours of relapses after two to three weeks of normal temperature. During the acme of the disease bacilli are numerous in the blood, but when the fever subsides

bacilli are no longer demonstrable. It seems, also, that at least many of the ephemeral rises of temperature in the course of convalescence from typhoid fever are associated with a short reappearance of bacilli in the blood. Schottmüller has found further, that the number of colonies developing on the plates of blood mixed with agar stand in a certain relation to the height of the fever and the severity of the cases, so that in addition to its evident diagnostic value the method also has prognostic significance.

Now the early and practically constant presence of typhoid bacilli in the blood in typhoid fever, and the evident relationship between the number of bacilli present and the severity of the symptoms indicate that the whole disease is dominated, so to speak, by this bacteremia. Formerly it was taught, and this teaching is still largely current, that in typhoid fever the essential point was the localization of the bacilli in the lymphatic apparatus of the intestines, and multiplying there they eventually made their way into the blood in relatively small numbers, more stress being laid on the absorption of toxins. But the occurrence of typhoid fever without intestinal lesions has shown already that these lesions are in reality not essential; furthermore, their extent and distribution are not proportionate to the severity of the disease; and now the results of bacteriologic studies of the blood seem to make it clear that in typhoid fever bacteremia plays a most prominent rôle. Schottmüller suggests that the bacilli, as a rule, enter by way of the intestines, with or without evident lesions, and that the incubation period corresponds to the time required for the bacilli to pass from the intestines through the mesenteric glands into the blood. He also believes that many of the intestinal lymphatic lesions are the result, not of primary invasion from the intestinal tract, but of hematogenous invasion, and in favor of this he urges the sudden and uniform relighting in many places of the process of the case of relapses. Be this as it may, the conception of typhoid fever as a bacteremia surely will lead to less importance being given to the intestinal treatment of typhoid fever than in the past.

Finally, mention should be made of the fact that since the introduction of bacteriologic examination of typhoid blood, it has been made clear that in the past typhoid fever has been made to stand for various related yet distinct infections caused by the so-called paratyphoid organisms. On the whole, it seems that the well-trodden field of typhoid fever still contains unexplored regions that will yield rich treasures to the clinician working with modern laboratory methods.

ETIOLOGY AND PROPHYLAXIS OF COLDS.

The word cold is probably the most used and the least understood word in modern medical practice. At this season of the year there is scarcely an ailment into whose etiology the taking of cold is not supposed to enter. Rheumatism, rhinitis, acute nephritis, tonsil-

¹ Münch. med. Wochenschr., 1902, xlix, 1562-1565

litis, catarrhal choledochitis, pneumonia, gastritis, pharyngitis, pleurisy and occasionally even metritis and oophoritis are attributed to cold. It is evident that there is concealed behind the expression a multiplicity of pathogenetic processes. As in all cases where a word is employed with a very wide meaning it is reasonably sure that its use gives a presumption of knowledge which does not really exist. Without the handy expression, "You have taken cold," which may mean nearly everything and therefore means next to nothing, to cloak ignorance of the real etiologic process at work, there would be much more careful search for the real causes of illness and a better understanding of the probable methods of prophylaxis that would lessen the number even of the minor ailments which now masquerade under the ample mantle of the word "cold."

The most familiar forms of colds are those of the respiratory passages. They are not invariably due to extreme cold, or even to considerable changes of temperature. The inhabitants of the higher, colder altitudes of Switzerland are much less subject to colds than their compatriots at lower levels. The best climate for most consumptives with tendencies to recurring catarrhal exacerbations is in the cold, rather rarefied air of somewhat elevated places. This has been the experience in this country as well as in the Alps. Our Canadian neighbors in their colder climate do not suffer as much from cold as do our own population, especially those living in crowded centers, for it is well recognized now that colds are much more frequent in our large cities than in country places. This is probably on account of the modern overheated buildings. Nansen remained for two years in the bitterly cold Arctic regions without ever suffering from a cold, and had not returned to city life for more than a week before he himself and several of his companions were confined to their rooms with catarrhal colds of the grippe type. Our own polar explorers have had similar experiences. It is not low temperature, then, that causes colds, but something intimately connected with the crowding together of many people.

There is a well-grounded impression that has been gaining vogue in recent years that the cause of colds is usually some form of microbic invasion. Already most cases of tonsillitis are frankly conceded to be of bacterial origin. Pneumonia, in the old days considered to be cold on the chest, is now referred to the pneumococcus. Rheumatism, for so long looked on as surely due to dampness and exposure, seems now to be definitely established as an acute infectious disease. There are other reasons for thinking colds due to invading bacteria. Tyndall pointed out over twenty years ago that the higher regions of Switzerland are practically free from microbes. Hence the absence of catarrhal affections in the Alps. The New York Board of Health in a recent bulletin announced that while there are many thousands of bacteria present in a cubic foot of air in the crowded tenement-house districts of the lower East

Side, there are but a few scattered micro-organisms in the same quantity of air from the wealthy, sparsely-populated residential quarter between 60th and 70th streets east of Fifth avenue. It is well recognized that inflammatory processes of mucous membranes are much more frequent among the poor than among the well-to-do, and this rarity of microbic flora in the air they breathe is at least one of the factors that accounts for the lesser incidence of colds.

It would seem, then, that the direct exciting cause of colds is not simply exposure to cold drafts, but to microbe-laden air. External cold, by disturbing circulatory conditions, especially by inducing congestion, is a predisposing cause. Head pointed out that counter irritation of certain parts of the skin produces sympathetic nervous and circulatory conditions in underlying organs. This vasomotor interference undoubtedly has its effect in preparing the soil for bacteria. Local ischemia lowers resistive vitality. The prophylaxis of colds, then, consists in the avoidance of impure air as well as the avoidance of exposure. The healthy react well and so resist invasion. The delicate have mucous membranes whose protective mechanism of reaction may be easily put out of order. For these the avoidance of crowded halls, of theaters, of large crowded stores, and, as far as possible, of crowded cars, must be the rule if they wish to escape their winter colds. It is well known now how susceptible to catarrhal complications tuberculous patients are under such exposure. Even the vigorous become susceptible, however, at times of fatigue or when through worry or emotional strain the nervous system is overborne and incapable of reaction, or when the individual is temporarily weakened by irregularities of diet or by some already existent affection. In a word, the etiology of a cold is not some mysterious disturbance of health due to weather conditions, but nearly always an acute infection, often somewhat contagious, and its prophylaxis will be best assured by a study of the conditions of lowered resistance under which infection usually takes place.

SCARLATINAL STREPTOCOCCUS SERUM IN SCARLATINA.

In the last issue¹ of THE JOURNAL occurs a full extract of Moser's recent report of his work on the treatment of severe cases of scarlet fever with a serum obtained from horses immunized with cultures of streptococci isolated from the blood of fatal cases of scarlatina. Moser assumes that the streptococci so commonly associated with scarlet fever, especially in severe and fatal cases, differ sufficiently from other streptococci to warrant the effort at manufacture of a special serum for therapeutic purposes with the special streptococci of scarlatina.

The use of ordinary streptococcus serum made by Marmorek not having any material influence on the course of severe scarlatina appeared to Moser to be an ad-

1. November 1, page 1149.

ditional reason for this attempt. Hence horses were immunized with mixtures of the cultures of streptococci obtained from fatal cases of scarlet fever, and the serum thus obtained was used in severe cases of the disease. Moser finds evidence of the efficacy of this serum in the figures that result from the comparison of the mortality rate of scarlet fever in the other hospitals in Vienna in 1901 (13.09 per cent.) with the mortality rate in his hospital since the beginning of the serum injections in 1900 (8.99 per cent.), and this in spite of the fact that the severe cases were freely admitted, the less severe cases being referred to other hospitals. Furthermore, he reports that the cases treated with the serum show early signs of improvement in the general condition and also in many of the severe local symptoms characteristic of the disease. Normal horse serum and Marmorek's new polyvalent serum did not seem to have such effects. Because only 81 of 699 patients with scarlatina were treated with this serum, the 81 cases being presumably the most severe so far as that could be determined at the time of the injections, a critical person would probably question the propriety of attributing the apparently lower death rate in this hospital to the use of the serum alone. It will also be noticed that the figures used by Moser in making his comparison do not concern comparable periods, strictly speaking.

While no one would like to doubt the reliability of the clinical observations as showing a decidedly favorable influence of the serum on the course of severe scarlatina, it is plain that much more extensive experience must be accumulated before its real value can be established definitely. But no one can find fault with Moser's effort on general grounds. Whatever the real cause of scarlatina may be, the disease is associated so constantly with streptococci, which in the majority of the severe and fatal cases are found in the blood, that it seems justifiable to believe that a really effective antistreptococcus serum would rob the disease of half its terrors. For these reasons we hope that Moser's serum will maintain the same efficacy in the hands of others as is claimed for it by its originator and that further efforts in this line may prove still more definitely successful. Streptococci offer so many obstacles to the investigator at the same time as they play so prominent a part in human infections that it may not be amiss to express the hope that much attention will continue to be given to the study of these organisms.

AN AVENUE FOR PHILANTHROPY.

The establishment of public baths is an avenue for philanthropy that is not sufficiently used. In the founding and aiding of hospitals and libraries, which are of so great need and so much appreciated, other needs of the masses should not be disregarded. At the Saratoga meeting of the Association, in an article soon to be published in *THE JOURNAL*, Dr. Ludwig Weiss quoted from Dr. Walker Laidlaw,¹ that in the eleventh and twelfth assembly districts of New York City, out of

13,657 families, 13,079 were without bathing facilities. This is a sample of conditions in the poorest sections of our large cities and illustrates the need of public baths. They are already to be found in some of the tenement districts in many of our large cities, and are made full use of and enjoyed. Buffalo, New York, Minneapolis and Chicago deserve especial praise for the public baths they have provided. Their number should be increased. It is hardly necessary to remark that equipment with shower and spray baths—not plunge or tub baths—is recommended, for hygienic reasons. As accessories there might be lectures on the hygiene of bathing by physicians selected by the medical societies, placards giving simple precautions in bathing and books on the subject. Simple gymnasia would be valuable, with instruction for underdeveloped shop girls and tradesmen of unequal development. Here we are but a step from the potent center of communal prophylaxis of disease, which is the burden of so many medical articles to-day, which in turn lack the practical bearing of suggestion of the starting point. Precepts are good; details of how to carry them out are better. Let us have more details suggested. Why is not the public bath the easiest and most natural avenue for communal prophylaxis?

THE PRINCIPLE OF LIFE.

In a recent address before the British Association for the Advancement of Science Prof. W. D. Halliburton¹ remarked that the revival of the vitalistic conception in physiologic work appeared to him a retrograde step. It is, in his opinion, a confession of ignorance and, what is still worse, a bar to progress. Why a confession of ignorance should be a bad thing is not at once apparent to every one; it has not heretofore been so considered by the greater men of science. Sir Isaac Newton is, of course, not a modern authority, but there are workers of the present day who, like him, appreciate the limitations of their acquisitions and modestly esteem themselves as only gatherers of pebbles on the shore with the great sea of knowledge still spread out before them. The vitalistic conception of the present day is simply the admission that there is something in living matter that is not identified with any known physical or chemical activities. We may find some so-called laws that it follows; that is, that it acts more or less regularly in certain definite ways, but that will not explain its essence any more than we know what gravitation is because we know how it acts. Professor Halliburton says: "It may be that there is a special force in living things that distinguishes them from the organic world. If this is so the laws that regulate this force must be discovered and measured, and I have no doubt that those laws when discovered will be found to be as immutable as the force of gravitation." He hopes, however, that it will ultimately be found amenable to known physical and chemical laws. It seems to us that the conception of vitality as a principle, force or whatever one may choose to call it, is very far from being a bar to progress. It is, on the other hand, an incentive to research as long as its mystery is undiscovered and a perpetual one if it happens to be undiscoverable. So long as it is not correlated with any physical forces, but seems to be in certain

1. N. Y. Med. Record, May 31, 1902, p. 861.

structures their controlling and guiding principle, it is certainly assuming a great deal to ask us to admit that there is no alternative, but that it must be proven identical with known physical and chemical agencies. We may do our best to prove it, but it is immodest and unscientific to be too sure that it will be proved and to base all our theories on this assumption. At present it is very far from proved.

THE DANGERS OF CLOSED STOVES.

The recent death of an eminent literary man in France from coal-gas poisoning through a defective stove has called out considerable medical comment, especially in the British medical journals. It appears that, as often happens, this accident has been followed by a number of similar ones in Great Britain and on the Continent, and they are used to point a moral—the dangers of closed stoves as compared with open grates for house heating, and self-congratulations indulged in by our insular contemporaries that the latter method of heating is the prevailing one among them. It is safe to admit that the closed stove is not the ideal warmth producer, but with a continental climate, like our own, with its extremes of cold, dependence on open grates would be still worse. It may be also that the arts of stove construction and management are more advanced in this country than in Great Britain, for accidents of sudden death from stove gas are rather rarely reported. When they do occur it is generally from carelessness or some special defect, and we believe that altogether, with nearly double the population, there are fewer deaths annually from this cause than occur in the British islands from burning due to open grates. Anthracite coal is burned in closed stoves over the whole north-western portion of the United States, and it is somewhat of a surprise to read in the *Lancet* that when thus used "it is prone to be excessively dangerous." If so, the risk is taken very lightly here, and it may be too lightly at times, for there is a danger, though generally a remote one. Many persons suffer, it is probable, in their general health from gaseous emanations without fully realizing the cause. The popular gas stoves and ranges have also their perils, as the *Lancet* points out, especially if through defect of the burners the combustion is incomplete. It is well that such facts should be known, and the death of M. Zola is a warning that we in this country may also heed, though our experience teaches us that with proper care the danger is slighter than seems to be the case abroad.

TRACHOMA IN THE UNITED STATES.

Because of the relative frequency of trachoma in the countries of the Orient and southern Europe, we have perhaps been accustomed to attach less importance than we should to the comparatively few cases in this country. Attention has been called to the danger of spreading this disease in this country by allowing immigrants who are affected with the disease to come here. Wilder¹ has pointed out that there are already large numbers of cases of trachoma in the United States, and he has especially investigated the prevalence of the disease in Illinois. In the Illinois Institute for the Blind at Jack-

sonville, 9.09 per cent. of the 451 pupils in attendance were totally blind from trachoma. As a cause of blindness trachoma was second only to blennorrhoea neonatorum, which was responsible for 17.25 per cent. of the total number of cases of blindness. At the Illinois Charitable Eye and Ear Infirmary, 5.6 per cent. of the cases treated are cases of trachoma. In the large hospitals for eye and ear diseases in the eastern part of the United States the proportion of trachoma cases is smaller, varying from 0.4 per cent. in the Massachusetts Charitable Eye and Ear Infirmary to 4.9 per cent. in the New York Eye and Ear Infirmary. In New York the larger proportion is probably explained by the numbers of poor foreigners living in the tenement districts. On the contrary, in the Illinois Eye and Ear Infirmary the cases come largely from the rural districts and are of American birth. Wilder found the disease most prevalent in the southern part of the state, and he believes that it is increasing in prevalence. The actual cause of the disease is not certainly known, but the infection is apparently usually due to either direct or indirect contact with previous cases. The vehicles of the infection in many cases are supposed to be sponges, wash cloths, basins, towels, etc. The most favorable conditions for the dissemination of the disease are furnished by intimate association of the infected persons with the healthy, together with neglect of the ordinary principles of hygiene and cleanliness. If certain precautions are taken there need never be any spread of the disease to healthy persons living about infected ones. It, like gonorrhoeal ophthalmia, is a preventable disease. The most important thing to accomplish in the prophylaxis of the disease is to impress on the patient or his parents the way in which he is dangerous to others, and to teach them how these dangers may best be counteracted. Instructions by physicians of the importance of care to prevent direct contact with the secretions from diseased eyes, and indirect contact through the medium of towels, sponges, etc., must be principally relied on to stamp out this disease in which so much can be done to prevent, but so little often to cure.

Medical News.

CALIFORNIA.

Physician Acquitted.—Dr. B. Franklin Weaver, arraigned at Bakersfield on a charge of practicing medicine without having first filed the necessary papers with the county clerk, was declared not guilty by the jury.

Personal.—Dr. William J. G. Dawson, St. Helena, has been appointed superintendent of the Home for the Feeble-Minded, Glen Ellen, and has been duly installed.—Dr. Charles E. Stone, Marysville, has been appointed superintendent of the Napa State Hospital, vice Dr. L. Franklin Dozier; Dr. Leonard M. Pulsifer, Napa, has been appointed assistant superintendent.

To Test Validity of Medical Bill.—Dr. Carl von Tiedemann, San Francisco, has applied to the Superior Court for a writ of review to test the right of Police Judge Fritz to examine into a charge of practicing medicine without a license, recently preferred against him by George G. Gere. He asserts that the statute of 1901, providing for the punishment of all persons attempting to practice medicine without a diploma satisfactory to the State Board of Medical Examiners, is unconstitutional.

Hospitals and Sanatoria.—Ground has been broken for a 160-bed hospital to be built by the Sisters of Providence in Oakland.—Dr. Joseph L. Ross, Redwood City, is building a sanatorium at Palo Alto, to cost \$15,000.—Drs. A. E.

1. Ophthalmic Record, November, 1901.

Hardin and J. E. Moutoux will open their new sanatorium at Sebastopol, January 1.—Fullerton is to have a hospital to cost \$3000.—Dr. John W. Robertson, Livermore, has purchased an additional block of ten acres and will erect a special building for the treatment of nervous and mental diseases, to cost \$30,000.—The new Berkeley Sanitarium is almost ready to receive patients.

ILLINOIS.

Chicago.

October Mortality.—The total deaths reported during October were 1964, or 120 fewer than during the preceding month, and the annual death rate was 12.70 per 1000, as compared with 12.25 in October, 1901.

Deaths of the Week.—The total deaths for the week ended November 1 were 439, or 44 less than the preceding week, but 31 more than for the corresponding week of 1901. This corresponds to an annual death rate of 12.56 per 1000. Of individuals under one year 77 died, and 79 over 60 years.

Banish Drinking Cups.—The drinking cup is to be banished from the public schools. The old-fashioned practice of drinking at the pump spout is to be substituted, provided the board of education adopts the proposition of Trustee Dr. W. A. Kuflewski, to prepare and submit to the buildings and grounds committee a plan for a drinking fountain that would provide a method of taking water without placing the lips to any vessel. Such a plan should include a constant stream of water in such quantities as to insure a sufficient amount for drinking and cleansing purposes. In speaking on his resolution Dr. Kuflewski said the cost would be little, if any, as the existing faucets could be turned to an angle of 45 degrees and adjusted to a gentle flow.

LOUISIANA.

New Orleans.

The Medical Department of Tulane University opened for its sixty-eighth annual session, October 27, with what promised to be a record-breaking attendance, and this in spite of increased entrance requirements.

Scandal in Coroner's Office.—A scandal has come to light in the coroner's office, due to a series of mysterious thefts from dead bodies in the morgue. An attaché of the office is under arrest and the coroner has requested the grand jury to probe the matter thoroughly.

Charity Hospital Changes.—On October 15, Dr. E. D. Fenner, first assistant house surgeon of the Charity Hospital, resigned his position, which he had held since February, 1898. Dr. J. M. Batchelor, second assistant house surgeon since 1896, was promoted to fill the vacancy. The vacancy existing in the second assistant house surgeons was filled at the meeting of the board of administrators, held November 3.

Anti-Leprosy Ordinance.—The following ordinance to prevent the spread of leprosy and to provide penalties for its violation, was adopted by the New Orleans City Council, October 7:

WHEREAS, The disease known as leprosy, which is contaminating and dangerous to the public health and welfare, exists in this state, and that persons afflicted with said disease are permitted to be at large, thus endangering public health.

Be It Ordained, by the Council of the City of New Orleans, That it shall be unlawful for anyone to harbor a leper or lepers, and the penalty to be imposed on anyone harboring said leper or lepers, and refusing to commit them to the care of the Leper Home, shall, on conviction before the recorder in whose jurisdiction said leper may reside, be subject to a fine of not less than five dollars, nor more than twenty-five dollars, or imprisonment for a term not exceeding thirty days.

MARYLAND.

Baltimore.

Personal.—Dr. W. Wayland Frames has been appointed visiting physician of Endowood Sanitarium for Consumptives in the suburbs, vice Dr. Walter P. Smith, deceased.

Typhoid Decreasing.—Typhoid fever is still on the decrease, there being in the last week but 3 deaths and 29 new cases reported. Pneumonia caused 11 deaths, cancer 8 and consumption 31.

The Journal of the American Medical Library Association, heretofore published in this city, will be discontinued. The proceedings of the association will hereafter be published in the *Medical Library Journal*, a quarterly devoted to medical libraries, bibliography, history and biography, the initial number of which will appear January 1.

Southern Dispensary.—The work of the Southern Dispensary has not been satisfactory to the Board of Supervisors of City Charities, which has decided to employ instead a physician and to give him an office and a female assistant, the latter to

look after the women and children. A contract will be entered into with one or more drug stores to furnish medicines. An appropriation of \$1340 was made for expenses.

MISSOURI.

St. Louis.

Proposed Sanatorium for Tuberculosis.—The movement looking to the establishment of a sanatorium for tuberculosis to be provided by the state, is well under way. It is meeting with encouragement from all directions and it is more than probable that a strongly endorsed petition will soon be presented to the legislature.

Leprosy Cured or Not.—The physician of Dong Gong, a Chinese leper who has been quarantined since November 1 last, states that by cleanliness and mild medication the leprosy has been cured. This would be gratifying but for the statement of another St. Louis specialist in skin disease, that the leprosy is not cured but is only quiescent.

About St. Louis Hospitals.—Very important additions to the hospital service in St. Louis are being made. The new City Hospital is nearing completion and will leave little to be desired in the way of building or equipment. Some effort was made to have the main buildings located to the west of the city, with an emergency hospital on the site of the old institution. The large grounds and central location of the latter induced the authorities to rebuild where the old hospital was located on Lafayette Avenue, but it is thought that the increasing demands of the city will require an additional building for convalescents near the city limits. The new Jewish Hospital, on Delmar, near the World's Fair grounds, while not large, is admirably constructed and bids fair to be well patronized. Almost adjoining this, the new St. Luke's Hospital is being built. At the old location the noise and limited space were great objections, but in the new situation, just north of Forrest Park, there will be freedom from all such drawbacks. The construction is modern in every particular and in keeping with the fine record of the hospital in which Hodgen and Mudd did their most important surgical work. The Centenary Hospital, attached to one of the medical colleges, is about ready for patients and will doubtless make a good showing. All the local colleges now have hospitals directly under the supervision of the faculty and utilized by the teaching staff. Mount St. Rose, the new hospital for tuberculosis, has just been opened for patients. It is situated on a hill at the extreme southern limits of the city. The large building will, at present rate of admission, soon be inadequate to the demand. It is under the care of the Sisters of St. Mary. So far nothing has been done with the \$1,000,000 legacy of the late Mr. Barnes for a general hospital except the selection of the grounds, but it is said that the building will soon be begun. Besides the large hospitals already in full operation, these new ones will aggregate a cost of over \$2,800,000, not including the hospital buildings for the Louisiana Purchase Exposition.

NEW JERSEY.

Personal.—Dr. Charles S. Braddock, Jr., Haddonfield, sailed for Bangkok, Siam, October 21. He will be assistant superintendent of the Royal Hospital in that city.—Dr. James T. Wrightson, Newark, has sailed to Bermuda for his health.

Mercer Hospital Wing Opened.—The keys of the new wing to Mercer Hospital, Trenton, were formally delivered to the president of the hospital by John Hall, October 31. Drs. Clark H. Gordon, E. J. Gordon, D. B. Ackley and Walter Madden have been made members of the auxiliary staff.

Hospital Staff Increased.—The work at Alexian Brothers' Hospital, Elizabeth, has so increased that it has become necessary to increase the medical staff, which now is composed as follows: Dr. John P. Reilly, president; Dr. Edward R. O'Reilly, vice-president; Dr. Joseph Funk, secretary, and Drs. Arthur Stern, Samuel Korngut, Alfred Q. Donovan, Thomas E. Dolan, George W. McCallion, Thomas F. Burnett, Elizabeth; Drs. Augustin V. Wendel and George F. Corrigan, Newark, and Dr. Walter E. Cladek, Rahway.

Typhoid Fever at Atlantic City.—Some time ago considerable publicity was given to a typhoid fever epidemic at Atlantic City, and the Academy of Medicine appointed a committee to investigate and report on the cause. The following is an abstract of the report: It was found, after careful investigation, that there was no possible source of contamination of the drinking water supply, which is derived from a series of artesian wells and from a small lake fed largely by natural springs and small streams. The sewerage system is that of West. All sewage flows through a common pumping station and thence is transported in large pipes into a government

highway of ocean water about two miles from the center of the city. During the past summer owing to a break in this pipe almost the entire sewage of the city passed directly into Penrose canal, an artificial waterway containing a comparatively small proportion of tidewater. Two authentic cases of typhoid fever can be traced to sources outside of Atlantic City, where all excreta was thrown into the sewer for four weeks and ten days respectively, with no disinfection. This contaminated the artificial waterway referred to. At another point within the city limits, known as Gardner's Basin, all the sewage of the immediate district was poured directly for many years so that at present these waters are contaminated, rendering them unsafe to use for any purpose. In these infected waters is found the strongest and most positive circumstantial evidence pointing to the source of the present trouble. The oyster supply is also considered as a potent source of contamination inasmuch as in the fattening process the oysters have been placed in water taken from the two infected waterways already referred to. With few exceptions all of the typhoid cases had indulged freely in raw oysters fattened in this way and undoubtedly contracted the disease from them. It has been ordered by the Board of Health that, in future, no oysters fattened in the infected waters be sold or delivered within the corporate limits of Atlantic City under the penalty of a heavy fine. The Atlantic City Board of Health has also issued regulations in regard to oyster fattening with a view to the proper regulation and safeguarding of the output. To the report of the committee is appended an endorsement from Dr. Alexander C. Abbott, professor of hygiene and bacteriology in the University of Pennsylvania.

NEW YORK.

Eddyites Indicted.—Mr. John Carroll Lathrop, the "healer," and Mr. and Mrs. Quimby of White Plains, have been indicted by the Westchester County grand jury on the charge of manslaughter in the second degree, and have been held in \$2,000 bail each. The case grew out of the neglect to call in a physician to Esther Quimby, who was suffering from diphtheria, and whose life, it was contended, might have been saved by proper treatment. The case has attracted considerable attention, not only because these are said to be the first indictments for manslaughter in such a case in the state, but also because public indignation was very justly aroused by the fact that while one of the Quimby children was ill at home the sister was allowed to continue in attendance at school, and the board of health was not notified until a few hours before the death.

New York City.

New York Eye and Ear Infirmary.—At the annual meeting of the board of directors of this institution it was resolved to close one of the three departments in a few weeks, owing to lack of funds.

Measles Closes Schools.—The occurrence of a serious outbreak of measles among the pupils of public school No. 13, at Rosebank, Borough of Richmond, has led the health authorities to close the school.

To Obviate Errors.—A good rule to govern ambulance surgeons has been put in force in Brooklyn. It provides that the ambulance surgeon shall bring to the hospital every person found by him unconscious, or partially so. It is hoped in this way to diminish the number of errors in diagnosis arising from confounding intoxication and injuries to the brain.

Vital Statistics.—In the statistical report just issued by the health department it is stated that the death-rate for 1901, assuming the population of the city to be 3,536,517, was 20 per 1,000, as against 20.57 in 1900. The total number of deaths was 70,720, of which 9,839, or almost one-eighth, were from tuberculosis. There were 80,735 births reported for the year.

Medical Lectures for the Laity.—A course of medical lectures for the public is one of the innovations which Columbia University is introducing this year. Beginning November 5, the lectures will be given at the College of Physicians and Surgeons in the lower lecture rooms every Wednesday afternoon at 5 o'clock until April 1, with the exception of the Christmas holidays, on anthropology, chemistry, zoology, etc.

For Poor Consumptives.—The sufferers from consumption in this city who are too poor to obtain expert treatment are to have the benefit of all that medical science can offer at a new clinic to be in the heart of some thickly populated district. The plans are under the charge of Dr. Laurence F. Flick, now head of the Free Hospital for Poor Consumptives at White Haven, Luzerne County, Pa. He has already received \$600,000

from a New York man for the purchase of suitable property, and more money is to be forthcoming for equipment and maintenance.

Trachoma in the Schools.—Mention has already been made of the prevalence of trachoma in the public schools, but it has assumed such proportions that the health commissioner has called a conference of ophthalmologists to consult as to the best way of meeting this scourge. Since the opening of the schools this fall no less than 6,667 children have been excluded from the schools because of eye affections. A published statement of the number of cases of trachoma treated in several prominent institutions this year as contrasted with the number treated in the same institutions last year gives a total of 460 for 1901 and 1,673 for the present year.

Suits for X-Ray Burns.—Dr. Samuel Lloyd, of the New York Post-Graduate School, has been sued for \$50,000 damages by a man who claims that he was severely injured by an x-ray examination made by Dr. Lloyd to determine the exact nature of a doubtful abdominal affection. Dr. Lloyd asserts that the dermatitis of which the plaintiff complains was not an x-ray burn, but was produced by the application of antiseptics before the operation. About the same time that this suit was begun a woman sued two dentists for alleged x-ray burns of the face causing destruction of her hair. Although the latter case was dismissed on a technicality, these suits indicate the responsibility incurred by users of the x-ray.

Puzzling Case of Trance.—The physicians of St. Vincent's Hospital have been both interested and puzzled over a girl who has been in the hospital for thirteen days in a state of trance. According to the history she suddenly became unconscious when about to retire one night, and was taken to the hospital the next day. She is a girl of 19, and beyond seeming to be a little moody and melancholy had apparently been in good health up to the sudden onset of the attack. Hysteria and self-hypnosis have been the diagnoses most in favor, but these views have received a set-back within the last few days by an elevation of the body temperature to between 102 and 104 F. Nourishment has been given by means of injections of predigested milk.

St. Luke's Needs \$800,000.—Appeal for an addition of \$800,000 to the general endowment fund of St. Luke's Hospital will be made to the public. In the year ending September 30, 2,663 people were treated. The expenses were \$183,059.56. Four wards are unused because of lack of funds. It was announced that the plan for building a pavilion for private patients at a cost of \$300,000 had not been abandoned. The amount received from legacies in the year was \$20,247, and for the endowment of beds \$66,346. On account of the great advances in surgery and the additional cost of the treatment of patients the figure for the endowment of beds, \$5,000 for adults and \$3,000 for children, was insufficient. It was decided to raise the price to \$7,500 for adults and \$5,000 for children.

Columbia's Report.—The report of the College of Physicians and Surgeons for the academic year 1901-2 recommends that study of the autopsy from the surgical standpoint be taken up at once. The report dwells on the fact that the rapidly increasing number of students is crowding the school beyond its limits. Six candidates for entrance had to be turned away last year, because of lack of accommodations in the laboratories. As a remedy for this, it is suggested that hereafter no conditioned students be admitted. It is expected that the attendance will be cut down next year by the new entrance rules, which will make the institution more post-graduate in character. Out of the 145 men who graduated last year, 101 secured hospital appointments, in all cases through competitive examination.

The Street Cleaning Department.—Some idea of the gigantic task that confronts the Commissioner of Street Cleaning in his efforts to keep the city in proper sanitary condition, may be obtained from a published report in which he pleads for more funds. He says that there are at present 1,301 draught horses in the department, and that each of these is required to remove daily 7,314 cubic yards, and to travel about twenty miles. The army of sweepers numbers 2,484 men, who daily sweep 908 miles of streets. Their troubles are increased by the fact that there are 14 miles of open cut for the rapid transit subway, that 1,289 buildings are in course of erection, excavations are being made for 1,562 feet of gas main, 5.43 miles of streets are undergoing repairs and 1.29 miles of water main and 22.8 miles of the city are torn up by heat, light and electric light companies.

Buffalo.

Hazing Abolished.—Hazing of freshmen and the rushes between classes have been abolished in the medical department

of the University of Buffalo. This is due to the decided action of the faculty, which apparently has been successful.

Personal.—Dr. Harvey R. Gaylord and wife have returned from Europe.—Dr. George S. Haviland will soon remove to New York City.—Dr. P. F. Hipp, East Aurora, has moved to Denver, Colo.—Dr. Mary Clayton has been appointed to the staff of the St. Lawrence Hospital, Ogdenburg.

Cost of Smallpox.—Since the disease broke out prior to the Pan-American Exposition there have been 431 cases in the city. The total expense of taking care of patients has been \$24,500. In the last epidemic in 1889 there were only 147 cases, which cost the city \$22,000. The average cost during the last epidemic was a fraction over 18 cents for each patient.

Isolation Hospital Needed.—The health commissioner urges the construction of a quarantine hospital. During the epidemic just ended the greatest number of cases treated at one time was 80, whereas the maximum capacity of the hospital was 50. Therefore, private houses had to be quarantined and hospitals made of them at great expense to the city, for the inmates in all such quarantined houses had to be provided with food, and at one time over 150 policemen were doing smallpox guard duty in one precinct. Had there been a hospital all of these cases could have been accommodated at one time and there would have been no need for the greater part of the expense. The saving to the city would have amounted to at least \$10,000.

OREGON.

Sanatorium Contract Let.—The contract for building the four-story Portland Sanatorium at Mount Tabor has been awarded, the contract price being \$17,000.

Medical Schools Open.—The medical department of the Oregon State University, Portland, opened, October 1, with an address by Dr. Simeon E. Josephi, dean of the faculty.—Willamette Medical School opened for its thirty-seventh annual session, October 1, with an enrolment of 35 students.

Graduated License Fees for Physicians.—It is announced in the lay press that physicians of Portland in the first class, doing a business of \$40,000 per year, are required to pay a license of \$15 per quarter; second class, between \$20,000 and \$40,000 per annum, \$10 per quarter; third class, between \$10,000 and \$20,000, \$10 per quarter; fourth class, between \$3000 and \$10,000, \$2.50 per quarter; fifth class, between \$2000 and \$3000, \$2 per quarter, and sixth class, under \$2000, \$1 per quarter.

PENNSYLVANIA.

Personal.—Dr. Israel Cleaver, Reading, has been appointed a member of the legislative committee of the Associated Health Authorities and Sanitarians of Pennsylvania, to represent the eleventh senatorial district in the association.

National Guard Assignments.—Orders were issued from the headquarters of the National Guard of Pennsylvania, October 25, announcing the following appointments in the medical department: Major Samuel C. Milligan, Pittsburg, surgeon Second Brigade headquarters; Major William G. Johnston, Titusville, surgeon; and First Lieutenant W. W. Robertson, assistant surgeon, Sixteenth Regiment.

Typhoid in the Twelfth.—In the Twelfth Regiment, N. G. Pa., encamped at Shenandoah, 30 or more cases of typhoid fever have occurred. Investigation by the local board of health showed that there was no typhoid among the residents; the conclusion was reached that the disease was probably brought to camp and spread by the soldiers. Although good sanitary regulations had been carried out it was decided best to move the camp. A site has been selected near by on higher ground.

Philadelphia.

New Maternity Hospital Finished.—The new maternity hospital addition to the almshouse, which was constructed at a cost of \$9,500, is fully finished and ready for occupancy. A committee has been appointed to formally accept the new building.

Proposed Medical Defense Fund.—A proposition for the establishment of a legal defense fund was introduced at the last meeting of the Philadelphia County Medical Society. It was contended that certain persons make a business of bringing damage suits against physicians and surgeons on the ground of malpractice. The proposal met with considerable opposition.

Jefferson Appointments.—At a meeting of the board of trustees of Jefferson Medical College, on October 16, the fol-

lowing appointments were made: Dr. S. Solis-Cohen, senior assistant professor of clinical medicine and physician to Jefferson Hospital, to succeed the late Dr. Wrigman; Dr. John M. Fisher, assistant professor of gynecology; Dr. Addinell Hewson, assistant professor of anatomy; and Dr. E. Quinn Thornton, assistant professor of materia medica.

TEXAS.

Physician's House Burned.—The house of Dr. George W. Allen, Flatonia, was recently destroyed by fire, with all its contents. The loss was about \$6000.

Fees in Texas.—The Texas law prescribes that traveling physicians pay \$50 occupation tax for the state and \$25 each for the city and county. Resident physicians pay no occupation tax.

Itinerant Drugless Practitioner Pays Tax.—A "Dr." Mueller, who advertised to treat by suggestion the people of New Braunfels, has had suit brought against him by the county attorney for \$50, the amount of the "occupation tax," and paid the tax.

Medical Colleges Open.—The medical department of the University of Dallas opened October 4.—The medical department of the University of Texas, Galveston, opened, October 1, with a freshman class exceeding 50 in number.—The medical department of Fort Worth University opened, October 2, with an attendance of nearly 200 students.

Providence Hospital.—This hospital, which has recently been incorporated at El Paso by a number of physicians and business men, is a general hospital chiefly intended for medical and maternity cases. The staff is as follows: Drs. Howard Thompson, Gottlieb Wehrle, Henry T. Safford, Alward H. White and Orlando C. Irwin, general medicine and obstetrics; Drs. J. Shelton Horsley, Marcus O. Wright, M. P. Schuster, Augustus L. Justice and Walter N. Vilas, surgery, and Drs. Edgar H. Irvin and Albert Wilkinson, eye, ear, nose and throat. The medical members of the board of trustees are: Dr. M. P. Schuster, president; Dr. Howard Thompson, vice-president; Dr. Alward H. White, secretary, and Dr. J. Shelton. As the hospital is largely owned and controlled by physicians, the institution will be run on a strictly ethical basis.

GENERAL.

Yellow Fever on U. S. Cruiser.—The U. S. Cruiser *Montgomery* is in quarantine at San Juan, Puerto Rico, having found one case of yellow fever on board on her way from Columbia to this country.

Medical Interne Wanted.—Examinations will be held December 9, for the position of medical interne at the Government Hospital for the Insane at Washington, D. C., the salary to be \$600. Applicants must be graduates from reputable medical colleges.

Summary of Plague at San Francisco.—During the ten months of 1902 past 35 cases of bubonic plague have been located in California, each case proving fatal. During the first six months there were 6 cases and in the last four months 29. This increase has led to alarm in other parts of the United States.

Cholera in Philippines Decreasing.—By cable October 30 it is reported from Governor Taft in the Philippines that cholera has practically disappeared from the Island of Luzon, and that in Manila there have only been an average of two cases a day during the previous ten days. In all twenty provinces are now practically free from cholera and only five provinces are now seriously affected. Chief Quarantine Officer Perry says, under date of September 19, that the disease has practically disappeared from those provinces first infected, but those most recently affected are suffering severely. He makes a conservative estimate that the cases of cholera that have actually occurred in the Philippine Islands since March 20 last aggregate 75,000, with a mortality of 75 per cent. Some towns have lost 10 per cent. of their population.

The Maltine Company's Essay Prize Award.—In the competition for the prizes of \$1,000 and \$500 for the best essays on "Preventive Medicine," offered by the Maltine Company, the first prize was awarded to Dr. W. Wayne Babcock, Philadelphia, for his essay entitled "The General Principles of Preventive Medicine," and the second prize to Dr. Lewis S. Somers, Philadelphia, for his essay entitled "The Medical Inspection of Schools—A Problem in Preventive Medicine." The judges were Drs. Daniel Lewis, New York; Charles A. L. Reed, Cincinnati, and John Edwin Rhodes, Chicago. There were 209 essays submitted from various states as follows: Pennsylvania,

25; New York, 22; Illinois, 15; Massachusetts, 12; Indiana and Ohio, 11 each; Wisconsin, 10; Iowa, 8; Michigan and Minnesota, 7 each; California, 6; Connecticut, Florida, Georgia and Missouri, 5 each; Colorado, Maine and New Jersey, 4 each; District of Columbia, Kentucky and Washington, 3 each; Kansas, Louisiana, Maryland, Montana, Nebraska, South Carolina, Texas, West Virginia and Ontario, 2 each; Alaska, Arkansas, Mississippi, New Hampshire, North Carolina, Oregon, Rhode Island, Tennessee, Vermont, Virginia and New Brunswick, 1 each; and 5 were unidentified. Thus 39 states and 2 provinces of Canada were represented. The judges say "the general high grade of their excellence has made the matter of selection very difficult."

CANADA.

The Smallpox Hospital, Ottawa, after having been closed a month has been reopened for the reception of three patients, all children of the same family.

Montreal's General Health.—Dr. Laberge, the medical health officer of Montreal, reports that the general health of that city is exceptionally good for this season of the year. There is only one very mild case of smallpox in the civic hospital; and the death rate last week was 102.

New Gymnasium for McGill University.—The building of a new gymnasium is again engaging the attention of the students and athletes of McGill University. It is proposed to raise \$100,000 for a three-story building for the accommodation of upwards of 1200 students attending the different faculties. The students themselves have already contributed a handsome little sum as a nucleus.

Instruction for Asylum Attendants in Ontario.—In order to improve the service at the insane asylums of Ontario, the Ontario government has just instituted an improved course of training for the attendants. Those entering on the course will be required to remain at the institutions until they graduate, and will be granted a diploma after two years of lectures and training. The training, as far as possible, will be similar to that received by hospital nurses.

New Professor of Hygiene at McGill University.—The medical faculty of McGill University has decided to recommend to the corporation of that institution the name of Dr. T. H. Starkey of University College Hospital, London, England, for the chair of hygiene, rendered vacant through the death of Dr. Wyatt Johnston. Dr. Starkey has had a very wide experience in hygiene in London and India, and at the present time is one of the leading hygienists of England.

Toronto Western Hospital.—The annual report of the Western Hospital of Toronto shows that the institution is in a very prosperous condition. During the past five years it has increased its work fourfold in every direction, and has made headway to the extent of \$13,000. It is the intention of the board of governors at an early date to erect a modern wing, with accommodation for 100 beds at graded prices. Nine new physicians have been appointed to the visiting staff.

The Chair of Medical Jurisprudence at Toronto University.—The medical faculty of Toronto University is having no little trouble in selecting a successor to the late Dr. Bertram Spencer to fill the chair of medical jurisprudence in that department. There are said to be no less than fifteen applicants for the position, including a number of prominent and well-known coroners of the city. At present it looks as though either Dr. John Caven, late professor of pathology, or Dr. W. H. Ellis, the professor of chemistry, will be asked to accept the chair.

Improved Sewage System for Toronto.—After dilly-dallying with the question of an improved sewerage system for Toronto for the past twelve years, the city council has at last picked up courage to submit the whole question to the rate-payers at the January municipal elections. It is proposed on the advice of the medical health officer, Dr. Charles Sheard, to ask for a vote of \$2,385,000 for this purpose; and as septic tanks and filtration on a sewage farm has been recommended by the health officer, it is altogether likely that system will be adopted. The cost of maintaining this system will be in the neighborhood of \$76,000 per annum.

Appointment of a Special Medical Immigration Officer.—In view of the large increase in immigration the Dominion government has arranged for the appointment of Dr. Leonard Ellis of St. John, N. B., as medical officer, to be attached to the immigration branch of the Department of the Interior, with special authority to examine into the health and circumstances of immigrants from the British Isles and European countries,

arriving at Canadian ports. The duties of this officer will include the examination of any immigrants rejected by the American commissioners at Canadian seaport towns. It is the intention of the government to prevent pauper immigrants landing in Canada, or those who are afflicted with dangerous diseases. Under the act passed at the last session of Parliament, the government has full authority to deport diseased immigrants and to prevent their landing in Canada.

The Smallpox Indian Trouble.—Some considerable friction has recently been caused between officials at the boundary line between Montana and the Canadian Northwest. The understanding of the matter on this side of the line is that a band of American Indians suffering from smallpox who were on a sixty days' pass from the United States Belknap Agency were turned back into Canada after having been refused admission to the Blackfoot Reservation by the agent in charge there. Although these were American Indians, the Canadian authorities provided them with medical attendance; and when they were fit to be removed, again applied to the agent for their admission into American territory, which, it is reported, was again refused as they did not belong to his agency. This explains the reports sent out from Helena, Mont., that the Canadian government was sending Canadian Indians with smallpox into the United States.

FOREIGN.

Fine for Prescribing by Mail.—A certain apothecary in Berlin has been fined about \$122 for promising a positive cure of diseases by correspondence.

Cholera Less in Egypt.—The latest reports from Egypt are that cholera has markedly lessened in its severity and prevalence. From October 25 to November 1, there were 225 cases and 212 deaths in all Egypt.

Plague Inoculation Progresses in India.—Instead of opposition to the wholesale inoculation with plague serum as a prophylaxis in India, the natives are giving their co-operation and the work is progressing satisfactorily.

Whooping Cough Serum.—The cable dispatches state that Dr. Leureaux of Brussels announces a serum for whooping cough which will greatly lessen the length and severity of the disease, as his experience thus far indicates.

Cholera rages in Jerusalem and the surrounding country. During the week ended November 1, there was 494 deaths in Jerusalem. There is great distress because of the inadequacy of medical aid and the increase in the prices of the necessities of life.

Life Insurance for Physicians in Charge of Plague Patients.—On the initiative of the mayor of Odessa the lives of six physicians who attend plague patients or make bacteriologic examinations in such cases, have been insured for a little more than \$5000 each.

Energetic Plague Quarantine at Yokohama.—Plague was discovered in Yokohama, October 6, and a vigorous quarantine was begun. A price was set on rats, and thousands were destroyed, over a thousand persons were removed across the bay to a camp, and many houses were burned. Only five new cases have occurred.

Promotion of the Scarlet Fever Serum.—The Austrian Minister of the Interior has ordered the Vienna officials, police and others, to make every effort to have all cases of scarlet fever, especially the severer ones, sent to the St. Anna Hospital for early serum treatment. The government has also made appropriations for further research in this line.

German Society for the Suppression of Venereal Diseases.—This society was formally organized at a public meeting held October 19, in the Berlin City Hall. Blaschko delivered an address on the prevalence, lesser on the dangers and Kirchner on the social importance of venereal diseases, Neisser and others on the scope and plans of the society.

Contract Practice.—The Medical Chamber of upper Austria has requested the physicians of that region to refuse to serve as attending physician for the garrison quartered at Steyr as the officer in command insists on restricting the remuneration for the work to one krone (\$0.25) a day, and makes the offer in terms that render it an insult to the profession.

Prescribing by Telephone in Finland.—This practice has assumed such proportions at Helsingfors that the authorities have had to regulate it. They require the prescription to be written down as received and telephoned back for verification, with the number. At the first opportunity the prescribing physician must sign the receipt. It is further prohibited to dispense poisons on a telephone prescription.

International Congress for Study of Professional Maladies.—The Italian government is organizing an international congress for the purpose of studying measures to prevent and cure the affections incidental to certain trades and professions. It will be held in 1904 at the time of the festivities to celebrate the opening of the Simplon, and will be supplemented by an exposition of industrial and professional hygiene.

New Pasteur Institutes in Africa.—Dr. Jameson telegraphed in September to London that rabies was terribly prevalent at the Cape, and begged to have an expert sent from the Paris Pasteur Institute to study the situation and found branch institutions. The English authorities, therefore, applied to the Paris Institute, and Dr. A. Loir from the latter has already left for Africa. He has founded branch institutions at Tunis and elsewhere and expects to have another at Boulogne soon in operation.

The New Russian Medical Review.—A new journal has been founded at Berlin for the purpose of acquainting the German reading world with what is being done in Russia. It will contain reviews of all the original articles appearing in Russian periodical literature, with a few original communications, all in German. The first number has an original work proceeding from Bobroff's clinic at Moscow on the "Operative Treatment of Exophthalmic Goiter." The editors are two well-known Russian physicians residing in Berlin, and the publisher is Max Hirsch. (*Russische Med. Rundschau*, Verlag von Max Hirsch, Berlin W. 35.)

Unique Medical Association.—Paris has recently witnessed the birth of a new association, called the "Médicale Humanitaire." It is based on the assumption that physicians will play the part of social intermediators, for which they have exceptional opportunities, knowing the needs of the sick and the discouraged poor better than any one else and, on the other hand, they are also in a condition to know the generous impulses of their wealthy patients. The association does not intend to have either regular meetings, fees or officers, but merely to direct benevolent impulses into worthy channels, and incidentally it is hoped that the new organization will acquire great influence in many questions of public and private interest.

Japanese Journal for Dermatology and Urology.—A new journal has recently been founded in Japan with this title. The original articles will appear in German, the abstracts in Japanese. The first numbers contain an article by Dohi on leprosy, which states that the nervous form is much more common there than the nodular form. He treats the latter with a mixture of ol. gynocardia and ol. oliv. ana, while he finds injections of a 1 or 2 per cent. solution of sublimate the best treatment for the nervous form, given continuously with intermissions. The statement is made in this periodical that the proportion of cases of venereal diseases in the Japanese Army fell from 70.2 per cent. to 55.5 in the last three years of the century.

Austrians Elected to German Professorships.—Dr. F. Kraus has been summoned from the medical clinic at Graz to fill Gerhardt's vacant chair of internal medicine at Berlin. This has occasioned surprise, as he is not a native German, having been born in Bohemia in 1858, and received his training under Chiari at Prague and at Vienna. He is the first Austrian to be invited to a chair in the Berlin medical faculty. His principal works have been on medico-chemical topics, and the *Allg. Med. Ct.-Ztg.* expresses amazement that His, von Noorden, Krehl and other German internists of greater renown and of about the same age, have been passed over for an outsider. Two other Austrians have recently been honored in the same way, Professor Rille of Innsbruck having been elected to the chair of dermatology at Leipzig and Professor M. Gruber of Vienna to the professorship of hygiene at Munich left vacant by von Pettenkofer. Professor Emmerich was the *extraordinarius* for the latter post, but was passed over and possibly solaced by the title and rank of regular professor conferred on him at the time.

Organization of the Profession in Austria.—Dr. A. Klein of Vienna has issued an appeal to the physicians of Austria to organize for the purpose of regulating contract practice. The present medical associations have not succeeded in remedying the evils of the present methods of sick insurance societies, the *Krankenkassen*, and consequently a national "socialist-medical congress" is summoned. He points out that the impoverishment of the members of the profession is constantly increasing, and the entire medical corps throughout Austria is profoundly moved, as they see their livelihood tottering and the future of the profession in jeopardy. Not only personal

and professional interests are at stake but also the public welfare, and silence and resignation are no longer in place, but protests, loud and emphatic, and warnings. A "socialist-medical congress" of all the physicians in the land would be a true *vox populi*, and a protest emanating from such a source would resound loud enough to penetrate to the high regions whence alone help can be derived. Such a congress would also promote local organization and closer union throughout the empire. An executive committee of ten has been appointed, which includes Stricker, Weinhardt and Schnirer, editor of the *Klin. Therap. Wochenschrift*.

LONDON LETTER.

Laws Governing Ice Cream.

As a result of the outbreak of ice cream poisoning described previously in *THE JOURNAL*, the health department of the city has issued certain regulations, which are to come into force on November 1, of which the following is a résumé: 1. Any manufacturer of or merchant or dealer in ice creams or other similar commodity who (a) permits ice creams to be manufactured or stored in any room in which there is an inlet or opening to a drain, or which is used as a living room or sleeping room; (b) in manufacture, sale, or storage omits to take any proper precaution for the due protection of such commodity from infection or contamination; or (c) omits, on the outbreak of any infectious disease among the persons employed in his business, to give notice to the medical officer of the City of London, shall be liable for every such offense to a penalty not exceeding \$10. 2. Every itinerant vendor, if not himself the manufacturer, shall exhibit in a legible manner on a conspicuous part of his barrow a notice stating the name and address of the person from whom he obtains such commodity, and if such vendor is himself the manufacturer of such commodity he shall in the same manner exhibit his own name and address, subject, otherwise, to a fine not exceeding \$10.

Benevolent Symptoms.

At the opening of the winter session at the Liverpool Medical School Sir Frederick Treves delivered a very philosophical inaugural address, in which he pointed out that many of the so-called symptoms of disease are expressions of a natural effort toward cure, and have for their end the ridding of the body of the very troubles they are supposed to represent. Inflammation is in all conditions a benevolent process, the purpose of which is cure. But for inflammation and suppuration every neglected septic prick would be fatal. Take, for example, appendicitis, with perforation. An acrid poison finds its way into the cavity of the peritoneum. The perforation is sudden, accidental, and may be preceded by no warning sign of any kind. Here, again, the disease proper may be without a single symptom. The symptoms of peritonitis which follow the perforation are distressing and urgent, but they are all benevolent in intent, and are the outcome of Nature's vigorous effort to minimize the calamity and save the patient's life. The intense pain and collapse impose on the victim absolute rest, in the most advantageous posture, that, namely, of recumbency. Peritonitis is concerned only in effecting good. It is in every instance a beneficent process. It is Nature's method of cure and is successful in millions of instances.

Bicycle Accidents: Twenty-Four Deaths in One Month.

A journal devoted to cycling has compiled a very serious list of accidents to cyclists in the short period of one month. It includes 24 deaths and 78 other serious injuries, and yet it does not profess to be complete. Examining the causes of death in this alarming list many will be found due to gross carelessness. Five deaths were due to loss of control descending hills, 3 at least to riding in traffic, one to electric tramways, 10 to collision with other vehicles or pedestrians, and the remaining 5 to other causes. In addition a policeman was killed who was run into by a cyclist.

Framboesiform Chancres.

At the Polyclinic Mr. Jonathan Hutchinson called attention to the fact that erratic chancres—i. e., extragenital ones—seldom exhibit characteristic induration. They may vary greatly in features and not infrequently they assume the condition of a mass of granulation tissue of considerable elevation not unlike a small raspberry. He showed three photographs of such chancres produced by tattooing. He also made use of this fact to support his well-known view of the identity of "yaws" or "frambesia tropica" and syphilis. This frambesiform character in the primary and secondary lesions of yaws has been insisted on by his opponents as distinguishing the latter from syphilis.

Correspondence.

A Disclaimer.

NEW YORK CITY, Oct. 29, 1902.

To the Editor:—A report has been widely disseminated through the secular press that I made a statement to some newspaper reporters that Professor William H. Welch had claimed the discovery of a universal virus or remedy which would immunize the human race from all forms of infection. No such claim was made by Professor Welch, nor has such statement been authorized by me. Yours truly,

JOHN A. WYETH, M.D.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

ASTASIA ABASIA?—LITTLE'S DISEASE?

To the Editor:—Erma Y. was born in June, 1890. For the first two hours after birth it was a question whether or not there was vitality enough to sustain life. By the use of artificial respiration, etc., reaction was finally brought about; this was immediately followed by a period of very severe convulsions, lasting about 36 hours, then in a milder form for 24 hours. All parts of the body are well developed, considering the fact that there has been no opportunity to exercise the muscles. All faculties except the power to use the voluntary muscles are normal. The intellect is clear and bright, and she understands perfectly everything spoken or read to her. If in reading a story to her one should leave out a sentence she will at once let one know the fact, and is not satisfied until the connection of the story is complete. If one is reading from a book and should lay it aside for a week or even two she will let it be known whether or not one has recommenced at the right place. She is very mindful of her little sisters, immediately seeing anything which she thinks may harm them, and warns them. The general health is perfect and she has never had any severe illness except the little troubles of childhood. The family history is perfect. She has never been able to walk or talk or control any of the voluntary muscles; she has perfect control of the rectum and bladder. She makes the sounds of a few words, such as "no," "yes," "pa," "ma," and a few other words of this character, so that they may be recognized. If placed on her feet she will sustain her own weight as long as her attention is kept away from herself, but as soon as she notices that anyone is watching what she is doing she immediately loses control of her legs and falls if not supported. In other words, she does not seem to have any control of the voluntary muscles, although if one takes hold of her hand and tells her to squeeze it she has a firm grip.

The voluntary muscles are placid. The hand shake is not spasmodic. She has had no convulsions since the one immediately following birth. The reflexes are normal. The weight is 44 pounds, the height 48 inches. The intellect seems to be perfectly normal, clear and bright; appearances and actions indicate that there is perfect comprehension of everything said or done. The strangest feature of the case to me is the fact that the intellectual powers are so strong and the motive powers so weak.

I am especially interested in this case. While it is not in my immediate family, there is a relationship existing that makes it of special interest to me. I will be glad to answer any questions or give any further information that I can. CHAS. S. HART.

ANS.—The case is one that needs a thorough examination that one might form a reliable diagnosis. From the symptoms given the most reasonable suggestion is infantile hysteria, possibly based on organic trouble, to find which would require careful study. It is barely possible that it is a case of Little's disease, although it lacks the characteristic spasmodic symptoms, and the other evidences of the organic lesions supposed to accompany this disease.—Ed.

ADVISABLE PROCEDURE WHEN PREFERRED TREATMENT IS REFUSED BY PATIENT.

Oct. 30, 1902.

To the Editor:—Dr. A. is called to see some cases of diphtheria, and after explaining the superiority of the antitoxin treatment fails to obtain consent of the family to use it and treats the cases according to older methods with success. Dr. B. is also placed in similar circumstances and fails to obtain consent to use antitoxin and refuses to treat the cases. Is Dr. A. or Dr. B. pursuing the better course?

M.

ANS.—A physician should not be obliged to compromise with his convictions. Further: If he considers antitoxin absolutely necessary, as in a laryngeal case for example, he would be wiser to give some one else the opportunity to sign a death certificate. He should not disregard humanity, however, and if he is the only physician available it would be his duty to stay and do all he can. In any event he should have his position fairly understood by the family.

DOSE FOR A CHILD.

ST. LOUIS, Nov. 3, 1902.

To the Editor:—In calculating the dose for a child, do you take the mean of the smallest and largest dose that is given to an adult and multiply that by the fraction $\frac{\text{Age}}{\text{Age} + 12}$?

J.

ANS.—Yes.

Association News.

The Committee on Medical Legislation of the American Medical Association is: Dr. H. L. E. Johnson, Washington, D. C., chairman; Dr. Wm. H. Welch, Baltimore, and Dr. W. L. Rodman, Philadelphia. The auxiliary committee of the Committee on Medical Legislation is as follows:

Alabama—
Arkansas—Dr. Frank Vinsonbaler, Little Rock; Alternate, Dr. C. Travis, Hot Springs.
Arizona—Dr. H. W. Fenner, Tucson.
California—Dr. Geo. H. Evans, San Francisco.
Colorado—Dr. Samuel D. Hopkins, Denver.
Connecticut—Dr. Max Mallhouse, New Haven.
Florida—Dr. Warren E. Anderson, Pensacola.
Georgia—Dr. Howard J. Williams, Macon.
Idaho—Dr. Robt. L. Nourse, Hailey, Idaho.
Indiana—Dr. W. N. Wishard, Indianapolis.
Indian Territory—
Illinois—Dr. Carl E. Black, Jacksonville.
Iowa—Dr. Van Buren Knott, Sioux City.
Kansas—Dr. R. A. Roberts, Kansas City.
Kentucky—Dr. J. N. McCormack, Bowling Green.
Louisiana—Dr. Chas. Chassaignac, 830 Canal St., New Orleans.
Maine—Dr. W. B. Moulton, Portland.
Maryland—Dr. John W. Chambers, Baltimore.
Massachusetts—Dr. J. F. A. Adams, Pittsfield.
Michigan—
Minnesota—Dr. Arthur Sweeney, St. Paul.
Mississippi—Dr. J. C. Hall, Anguilla.
Missouri—Dr. D. C. Gore, Marshal.
Montana—Dr. J. F. Spelman, Anaconda.
Nebraska—Dr. B. F. Crummer, Omaha.
Nevada—
New Hampshire—Dr. Chas. R. Walker, Concord.
New Jersey—Dr. Geo. E. Reading, Woodbury.
New Mexico—
New York—Dr. E. E. Harris, New York City.
North Carolina—Dr. Richard H. Lewis, Raleigh.
North Dakota—Dr. H. A. Beaudoux, Fargo.
Ohio—Dr. N. P. Dandridge, Cincinnati.
Oklahoma Territory—
Oregon—Dr. Andrew C. Smith, Portland.
Pennsylvania—Dr. John B. Roberts, Philadelphia.
Rhode Island—Dr. Gardner T. Swarts, Providence.
South Carolina—Dr. E. F. Parker, Charleston.
South Dakota—Dr. R. C. Warne, Mitchell.
Tennessee—Dr. T. J. Happel, Trenton.
Texas—Dr. J. D. Osborn, Cleburne.
Utah—Dr. E. V. Silver, Salt Lake City.
Virginia—Dr. Lewis G. Pedigo, Leatherwood.
Vermont—
Washington—Dr. J. B. Eagleson, Seattle.
West Virginia—Dr. W. P. Goff, Clarksburg.
Wisconsin—Dr. U. O. B. Wingate, Milwaukee.
Wyoming—Dr. R. Harvey Reed, Rock Springs.
U. S. Marine Hospital Service—Dr. Walter Wyman.
U. S. Navy Medical Corps—Dr. R. A. Marmion, U. S. N.
U. S. Army Medical Department—Col Chas. Smart, Asst Surgeon-General, U. S. A.

New Members.

The following is a list of new members for the month of October:

ALABAMA.
Berry, W. T., Birmingham.
Wildner, W. H., Birmingham.
Jackson, W. R., Mobile.
ARIZONA.
Chenoweth, W. F., Nogales.
ARKANSAS.
McClain, M. D., Woodson.
Bathurst, W. R., Prescott.
Walt, D. C., Altheimer.
Woolford, W. S., Kingsland.
Thibault, H., Ashvale.
Johnson, J. J., Harrison.
Ellis, L. R., Hot Springs.
CALIFORNIA.
Burrows, F. G., San Francisco.
Ewer, E. N., Oakland.
Hess, H. A., San Francisco.
Terry, W. I., San Francisco.
Crease, F. J., Bakersfield.
Peck, R. E., San Francisco.
Rosenthal, A. G., San Francisco.
Zelinsky, Frank, San Francisco.
Meininger, L. L., San Francisco.
COLORADO.
Ragsdale, E. W., La Junta.
Fewkes, John, Lamar.
Packard, G. B., Denver.
CONNECTICUT.
Kirby, F. A., New Haven.
Mariani, Nicola, New Haven.
St. John, S. B., Hartford.
Field, A., East Hampton.
Cremin, L. M., New Britain.
DELAWARE.
Marshall, G. W., Milford.

DISTRICT OF COLUMBIA.
Blackburn, R. S., Washington.
Mackall, Louis, Jr., Washington.
Lemon, Hanson T. A., Washington.

FLORIDA.
Weaver, E. R., Trilby.
Cyrus, Wm. H., Palaska.
Platts, Clyde P., Fort Pierce.

GEORGIA.
Morrison, A. A., Savannah.

IDAHO.
Rich, Lorin F., Rexburg.

ILLINOIS.
Webster, E. H., Evanston.
Conlon, Andrew A., Chicago.
Lewis, Thos. H., Chicago.
Byrne, Wm. D., Chicago.
Reed, Chas. B., Chicago.
Slaymaker, S. R., Chicago.
Small, Chas. P., Chicago.
Street, R. H., Chicago.
Colwell, N. P., Chicago.
Bass, G. E., Chicago.
Cunnt, Edward, Chicago.
Shortle, A. G., Chicago.
Broell, A. C., Chicago.
Barnes, S. M., Fairbury.
Foster, I. A., New Haven.
Hanna, W. McM., Lisbon.
Weber, J. C., Clay City.
Miller, S. M., Peoria.
Whiting, Marcus, Peoria.
White, H. A., St. Charles.
Adams, Geo. C., East St. Louis.
Cooper, J. F., Elmwood.
Miles, Walter, Viola.
Watts, E. L., Triumph.
Steele, H. D., Princeton.
Stetler, T. H., Paw Paw.
Robinson, L. F., Ullin.
Nusbaum, D. H., Bloomington.
Wash, G. A., Palmyra.
Grigson, R. J., Augusta.
Twitcheil, J. W., Belleville.
Ames, E. H., Antioch.
O'Shay, F. J., Braidwood.

INDIANA.
Sexauer, C. F., Hartford City.
Wheeler, H. H., Indianapolis.
Clark, J. H., Connersville.
Blinks, E. G., Michigan City.
Yenne, C. H., Washington.
Stevens, B. C., Logansport.

IOWA.
Replogle, H. M., Udell.
Silver, M. E., Sioux City.
Donnelly, Wm., Ryan.
Keith, W. K., Fontanelle.
McClees, C. H., Marne.
Hancock, J. C., Dubuque.

KENTUCKY.
Gaines, F. M., Carrollton.
Holland, S. C., Grahamville.
Griffin, J. W., Lewisport.
Chambers, Frank, Chambers.
Heavels, J. H., Hawesville.
Lightfoot, C. R., Hawesville.
Griffin, Albert, Utility.
Milner, J. T., Patesville.
Foster, A. C., Morganfield.
Knox, J. W., Lewisport.

LOUISIANA.
Magruder, M. J., New Orleans.
Chassaignac, Chas., New Orleans.
Jacoby, Alfred, New Orleans.
Smith, V. C., Henderson.
Fontaine, B. W., Barnes.

MAINE.
Abbott, E. G., Portland.

MARYLAND.
West, M. B., Baltimore.

MICHIGAN.
Murray, E. B., Ypsilanti.
Yates, Albert, Washington.
Jenkins, C. G., Lansing.
Greenwood, J. H., Detroit.
Kefchline, J. M., Battle Creek.
Williams, M. A. W., Bay City.
Fitzgerald, J. J., AuSable.
Betteys, A. M., Oxford.

MINNESOTA.
McNamara, J. G., St. Paul.
Jackson, R. N., Faribault.

MISSISSIPPI.
McLean, S. H., Jackson.
Crawford, W. W., Hattiesburg.

MISSOURI.
Corbin, D. R., Bloomfield.

NEW JERSEY.
Poole, L. E., West Hoboken.
Armstrong, Alex., Trenton.
Hutchinson, A. D., Trenton.
Holcombe, C. H., Trenton.

NEW MEXICO.
Diaz, J. M., Santa Fe.

OHIO.
McClung, J. J., Jackson.
Warren, D. B., Wellston.
Morgan, J. F., Jackson.
Sanders, A. F., Cincinnati.
Hobbs, W. A., S. Liverpool.
Moore, H. M. W., Columbus.
Montgomery, R. H., Youngstown.

OREGON.
Holcomb, Curtis, Portland.

PENNSYLVANIA.
Rothrock, A. M., West Chester.
Comer, J. A., Vintondale.
Wilson, Henry, Somerset.
Hanna, Hugh, Philadelphia.
Alleman, Frank, Lancaster.
Donaldson, W. F., Pittsburg.

SOUTH CAROLINA.
Jefferies, J. L., Spartanburg.

SOUTH DAKOTA.
McRoberts, Wm. J., Edgemont.

TENNESSEE.
Michle, W. T., Memphis.
Ellis, G. M., Chattanooga.

TEXAS.
Webster, H. R., Texarkana.

VERMONT.
Gleason, D. A., No. Bennington.

VIRGINIA.
Evans, William, Norfolk.
Reade, F. M., Richmond.
McGuire, J. A., Wise.
Foster, W. B., Richmond.

WASHINGTON.
Wilson, R. D., Tacoma.
MacLean, J. D., Spokane.
Henssy, W. C., Seattle.
Betts, C. A., Everett.

WEST VIRGINIA.
Crary, Archibald, Huntington.
Enslow, C. R., Huntington.
Ridgway, F. B., Wheeling.
Stuart, T. F., Huntington.
Vinson, L. T., Kenora.

WISCONSIN.
Gavin, S. E., Fond du Lac.
Gifford, H. B., Juda.

aminers, at St. Paul, October 7, 8 and 9: Subjects, 12; questions, 95; percentage required to pass, 75; written examination; total number examined, 50; passed, 45; failed, 5.

Candl. Sch. of date. Pract.	PASSED.	College.	Year Grad.	Per-cent.
2086	R.	College of Phys. and Surgs., Iowa...	1898	76.8
2087	R.	College of Phys. and Surgs., Chicago...	1902	76.6
2102	R.	College of Phys. and Surgs., Chicago...	1902	*79.1
2109	R.	College of Phys. and Surgs., Chicago...	1902	79.1
2125	R.	College of Phys. and Surgs., Chicago...	1902	77.1
2130	R.	College of Phys. and Surgs., Chicago...	1902	86.7
2128	R.	Coll. of Phys. and Surgs., Wisconsin...	1902	76.1
2088	R.	Rush Medical College.....	1897	85.1
2098	R.	Rush Medical College.....	1901	75.4
2106	R.	Rush Medical College.....	1902	82.4
2101	R.	Rush Medical College.....	1902	87.6
2108	R.	Rush Medical College.....	1902	90.3
2111	R.	Rush Medical College.....	1902	75.1
2113	R.	Rush Medical College.....	1900	80.3
2089	R.	University of Minnesota.....	1902	77.5
2114	H.	University of Minnesota.....	1900	86.1
2118	R.	University of Minnesota.....	1893	84.4
2104	R.	University of Michigan.....	1893	88.6
2121	R.	University of Michigan.....	1898	86.3
2126	R.	University of Michigan.....	1877	*75
2135	R.	University of Michigan.....	1902	85.5
2119	R.	University of Maryland.....	1902	80.5
2091	R.	Kansas Medical College.....	1899	75.2
2092	R.	Trinity University.....	1902	86.8
2093	E.	Bennett Medical College, Chicago...	1901	81.3
2097	E.	Bennett Medical College, Chicago...	1902	85.9
2094	R.	Hospital Med. Coll., Louisville.....	1897	90.1
2095	E.	Ecl. Med. Inst., Cincinnati.....	1895	77.9
2096	H.	Hahnemann Med. Coll., Philadelphia...	1902	*83.3
2099	E.	McGill University.....	1900	84.4
2100	R.	Jefferson Med. Coll., Philadelphia...	1902	77.6
2103	R.	Harvard University.....	1901	82.7
2105	R.	Hamline University.....	1902	*83.1
2107	R.	Hamline University.....	1902	*87.2
2112	R.	Hamline University.....	1896	*75
2115	R.	Hamline University.....	1902	77.7
2116	R.	Hamline University.....	1902	86.4
2124	R.	Hamline University.....	1902	*79.8
2110	R.	Med.-Chir. Coll., Philadelphia.....	1902	87.7
2117	R.	Northwestern University, Chicago...	1902	80.9
2120	R.	Northwestern University, Chicago...	1901	88.8
2127	H.	New York Homeo. Med. Coll.....	1900	84.4
2132	R.	Saginaw Valley Med. Coll.....	1901	82.7
2133	H.	Homeo. Med. Coll., St. Louis.....	1881	81.3
2134	R.	Kentucky School of Medicine.....	1902	81.5

FAILED.				
2090	R.	Barnes Med. Coll., St. Louis.....	1901	74.8
2122	R.	Marion Sims Med. Coll., St. Louis..	1902	63.1
2123	R.	College of Phys. and Surgs., Chicago...	1902	72.8
2131	R.	College of Phys. and Surgs., Iowa...	1898	66
2129	H.	Hahnemann Med. Coll., Chicago....	1897	63.8

* Partial examination in certain subjects; unsuccessful in previous examinations.

Book Notices.

A TEXT-BOOK ON DISEASES OF INFANCY AND CHILDHOOD. For the Use of Students and Practitioners. By Henry Koplik, M.D., Attending Pediatricist to Mt. Sinai Hospital, New York. Illustrated with 169 Engravings and 30 Plates in Color and Monochrome. Cloth. Pp. 675. Price, \$5.00. New York and Philadelphia: Lea Brothers & Co. 1902.

If there is one branch of medical practice of more importance than another for the general practitioner, it is that of the diseases of children. So, while the books on pediatrics are increasing, it is by no means a bad augury, but bespeaks the fact that the profession is calling for such works and that the subject is receiving the study its importance demands. The book before us is a valuable addition to the literature. Dr. Koplik has not given us as pretentious a volume as some of the other text-books on diseases of children, but he has handled the subject in a practical and concise manner. The chapter on specific infectious diseases is especially good. Like too many authors of books on this subject, he has not given as much space to the diseases of the newborn as is desirable. This, we are sorry to say, is too commonly relegated to works on obstetrics, and in them it is nearly always inadequately treated. In discussing the treatment of the various diseases, the author is prone to be too general; full and specific information ought to be found in the text-books and nothing taken for granted. The book is well illustrated.

PHYSICAL DIAGNOSIS. Diseases of the Thoracic and Abdominal Organs. A Manual for Students and Physicians. By Egbert Lefevre, M.D., Professor of Clinical Medicine and Associate Professor of Therapeutics in the University and Bellevue Hospital Medical College. Illustrated with 74 Engravings and 12 Monochrome Plates. Cloth. Pp. 448. Price, \$2.25. Philadelphia and New York: Lea Brothers & Co. 1902.

This little work on physical diagnosis is comprehensive and includes a great deal within a small space. Each subject is

State Boards of Registration.

Utah Report.—The Board of Medical Examiners of the State of Utah met at Salt Lake City, October 6, and examined 6 candidates, of whom 1 failed.

Candl. Sch. of date. Pract.	PASSED.	College.	Year Grad.	Per-cent.
341	R.	Coll. P. and S., San Francisco.....	1897	89 6-7
342	R.	Coll. P. and S., San Francisco.....	1897	83 1-7
343	R.	Iowa Coll. P. and S., Des Moines....	1901	80 2-7
345	R.	Coll. Phys. and Surgs., Chicago....	1902	80 3-7
344	R.	Starling Medical College, Ohio....	1882	87 3-7

FAILED.

7	R.	Missouri Medical College, St. Louis	1890	60 5-7
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Minnesota Report.—The following is the report of the examination held by the Minnesota State Board of Medical Ex-

taken up systematically and the subjects are presented in a lucid manner. One is especially pleased to note the careful attention that is given to methods of examination. The description of the proper method of percussion, with the figures, is much better than is found in many of the books on physical diagnosis. Much attention is paid to the configuration of the normal and the pathologic chest, and as might be expected, a good deal is made out of the anatomic relations of the bronchi, as Lefevre's work in this respect is already well and favorably known. While, naturally, the physical diagnosis, as regards the abdomen, occupies less space than that allowed the chest, possibly a criticism might be offered in that the abdomen has received less attention than it deserves. Altogether the book is to be heartily commended.

THE TREATMENT OF TABETIC ATAXIA by Means of Systematic Exercise. An Exposition of the Principles and Practice of Compensatory Movement Treatment. By Dr. H. S. Frenkel, Medical Superintendent of the Sanatorium "Frelhof" in Helden (Switzerland). Only Authorized English Edition. Translated and Edited by L. Freyberger, M.D. (Vienna), M.R.C.P. Lond., M.R.C.S. Eng., Hon. Physician to the St. Pancras and Northern Dispensary. With 132 Illustrations. Cloth. Pp. 185. Price, \$3.00. Philadelphia: P. Blakiston's Son & Co. 1902.

Frenkel's method of treating ataxia has been before the profession for some years, but its thorough understanding will be helped by the publication of this book. It is not exactly a translation, but an adaptation to the requirements of the medical practitioner. Frenkel's treatment, as is probably well known, is based on the sensory theory of ataxia and is practically a re-education of the organs in this particular point of view. The theory is thoroughly stated in the first part of the book; the latter part is given up to the details of treatment and here the descriptions and illustrations meet the requirements very thoroughly, so that anyone who has the patience and time could conduct the treatment to a considerable extent even without elaborate apparatus. The book should prove a useful one.

THE FORCE OF MIND OR THE MENTAL FACTOR IN MEDICINE. By Alfred T. Schofield, M.D., M.R.C.S., etc., Hon. Physician to Fruedenheim Hospital. Cloth. Pp. 309. Price, \$2.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

This is a little work devoted to the subject of the psychic treatment of disease. The neglect of the mental factor in medicine, according to its author, has been a serious weakness in the past and still continues. He takes for his text throughout the "unconscious mind," which is practically what is called an automatism of the perfected organism. He maintains that the mental factor including the use of the "unconscious mind" is present in all diseases functional and organic; that it is a causal factor in most organic diseases. Of course, a discussion of the phenomena and treatment of hysteria, neurasthenia and other psycho-physical conditions have taken up a large part of the work. While in some respects the work is open to criticism, as a whole, it will be profitable to the physician who peruses it.

THE MEDICAL TREATMENT OF GALLSTONES. By J. H. Keay, M.A., M.D. Cloth. Pp. 126. Price, \$1.25. Philadelphia: P. Blakiston's Son & Co. 1902.

This is an unsuccessful attempt to make out that the medical treatment of gallstones is far superior to the surgical treatment in all except a very small number of selected cases. The author became convinced of this through his own experience. After having tried medical treatment in vain, he was about to submit to a surgical operation, when the gallstones passed and he was relieved. This, to his mind, was convincing proof of the superiority of medical to surgical treatment. About four-fifths of the book is taken up with a hasty and somewhat superficial discussion of the etiology, symptomatology and diagnosis of gallstones, and only about twenty pages are occupied with the discussion of the medical treatment. There is nothing new in his therapy.

Marriages.

ENOS E. PALMER, M.D., to Miss Florence Cook, both of Ottawa, Ill., October 22.

ADAM G. NICHOL, M.D., to Miss Bertha Check, both of Nashville, Tenn., November 5.

SAMUEL MOORE, M.D., Danville, Ill., to Miss May Smith of Philadelphia, November 5.

W. DUFF BULLARD, M.D., to Miss Anna Mary Riker, both of New York City, October 29.

GEORGE LATROBE EWALT, M.D., to Miss Emma K. Merritt, both of Baltimore, October 22.

FREDERIC C. BISHOP, M.D., to Miss Gertrude Craig, both of New Haven, Conn., October 20.

W. FRANKLIN TAYLOR, M.D., to Miss Lena Virginia Brehme, both of Laurel, Md., October 25.

JOHN M. GENTRY, M.D., Stony Fork, Pa., to Mrs. Emily J. Wilcox of Olmsville, Pa., October 15.

ALPHEUS A. SWAYZE, M.D., Hackensack, N. J., to Mrs. O. J. Shepard, at Westfield, N. J., October 6.

S. C. SCHMITT, M.D., Blue Earth City, Minn., to Miss Fannie E. Robbins of Austin, Minn., October 23.

C. DAY SHUART, M.D., Brandon, Wis., to Miss Ellen Lucy Maine of Stevens Point, Wis., October 22.

F. GREGORY CONNELL, M.D., Leadville, Colo., to Miss Isabella Stickney of Wauwatosa, Wis., October 21.

FRANCIS X. DERGIN, M.D., Chicopee, Mass., to Miss Emma Tetrault of Springfield, Mass., October 22.

ENNION G. WILLIAMS, M.D., Richmond, Va., to Miss Anna Heath Lassiter of Petersburg, Va., October 21.

CHARLES E. SNYDER, M.D., to Miss Annie E. Carville, both of Kent Island, Queen Anne County, Md., October 21.

ROY BARTLETT METZ, M.D., Cleveland, Ohio, to Miss Olive Rossiter McCleary, at Stoneboro, Pa., October 20.

FRED EVERETT WHEELER, M.D., West Paris, Maine, to Miss Annie Laura Williams of Bath, Maine, October 22.

WILLIAM CLAY ABEL, M.D., West Union, W. Va., to Miss Laura May Greene of Campello, Mass., October 22.

JOHN SHEPARD, M.D., Sheboygan Falls, Wis., to Miss Huldah Thompson of Milwaukee, at Beloit, Wis., October 22.

JOHN C. LEGRANDE, M.D., Birmingham, Ala., to Mrs. Finck of Louisville, Ky., at Chattanooga, Tenn., October 29.

HENRY ERSKINE PRESSLY, M.D., Birmingham, Ala., to Miss Mamie Moore of Marion Junction, Ala., November 5.

HARRY AUSTIN COSSITT, M.D., Morris Plains, N. J., to Miss Pauline Calvin Burns of New York City, October 22.

RICHARD MILLS PEARCE, M.D., to Miss May Harper, daughter of Dr. John H. Musser, all of Philadelphia, November 6.

PETER DUNCAN MACNAUGHTON, M.D., Calumet, Mich., to Miss Ethel Mayo Rossiter of Brooklyn, N. Y., November 5.

J. CARROLL MONMONIER, JR., M.D., Baltimore, to Miss Helen Fenwick Burr of Florida, at Washington, D. C., October 22.

CHARLES S. HOOVER, M.D., son of Dr. Collins M. Hoover, to Miss Helen Speaker Williams, both of Alliance, Ohio, October 22.

LINCOLN DAVIS, M.D., to Miss Katherine B. Crowninshield, both of Boston, Mass., at Peaches Point, Marblehead, October 21.

Deaths.

Woodford M. Vertrees, M.D. University of Louisville (Ky.), 1852, surgeon of the Sixth Kentucky Infantry, C. S. Army, a member of the Tennessee Medical Association, one of the founders of the medical department of the University of Tennessee and for quarter of a century professor of materia medica in that institution, died at his home in East Nashville, Tenn., October 22, from nervous exhaustion, after an illness of four days, aged 76. Resolutions of respect were adopted by the faculty of the medical department of the University of Tennessee and by the physicians of Nashville.

William B. Whitehead, M.D. University of Pennsylvania, Philadelphia, 1853, died in Denver, October 13, aged 70. He was a veteran of the Crimean war, through which he served as surgeon in the Russian Army, receiving the decoration of St. Stanislaus from the Czar on account of distinguished service. He also served as division surgeon in the Confederate service during the Civil war. He was one of the founders of the medical departments in the Universities of Colorado and Denver. He has been a resident of Colorado for thirty years and was instrumental in securing a sewage system for Denver.

Daniel E. Hughes, M.D. Jefferson Medical College, Philadelphia, 1875, chief resident physician at the Philadelphia

Hospital and Almshouse for twelve years, and a member of the American Medical Association, died at the hospital, October 28, from tubercular peritonitis, alleged to have been contracted as a result of partaking of food prepared by a tubercular patient at the hospital who had been pressed into service as a cook.

Joseph Sheppard, M.D. Bellevue Hospital Medical College, New York, 1849, a member of the American Medical Association, the Medical Society of New Jersey, and the Cumberland Medical Society, a surgeon in the Army during the Civil war and the oldest practitioner of Bridgeton, N. J., died at his home in that city, October 23, aged 74.

Andrew J. Baxter, M.D. Medical College of Ohio, Cincinnati, 1861, for more than twenty-five years surgeon to Alexian Brothers' Hospital, Chicago, and for a long time surgeon at Cook County and Michael Reese hospitals, died at his home in Chicago, October 25, from paralysis, after an illness of eighteen months, aged 66.

Theodore F. C. Van Allen, M.D. Albany (N. Y.) Medical College, 1883, ophthalmic and aural surgeon at St. Peter's Hospital, Albany, and some-time president and treasurer of the Albany County Medical Society, died at his home in Albany, October 28, from consumption, after an illness of about one year, aged 41.

Jacob F. Hoffa, M.D. Jefferson Medical College, Philadelphia, 1876, three times a member of the Pennsylvania legislature, and president of the Montour County Medical Society, died at his home in Washingtonville, Pa., October 27, from inflammation of the bowels, after an illness of two weeks, aged 50.

Benjamin F. Holcomb, M.D. University of Wooster, Cleveland, 1865, assistant surgeon of the Thirty-sixth Ohio Volunteer Infantry in the Civil war, and for many years a practitioner of Jackson, Ohio, died at the home of his daughter in Fostoria, Ohio, October 21, from paralysis, aged 67.

Joseph C. Rutherford, M.D. Vermont Medical College, Woodstock, 1849, surgeon of the Tenth and Seventeenth Vermont Infantry, U. S. V., in the Civil war, and a practitioner in Newport, Vt., for more than 40 years, died at his home in that town, October 20, from heart disease, aged 84.

Joseph Sylvester Richmond, M.D. Vermont Medical College, Woodstock, 1853, for a term president, and for many years secretary of the Vermont State Medical Society, and a member of the Connecticut River Medical Association, died at his home in Windsor, Vt., October 22, aged 74.

John Henry Howard, M.D. Kentucky School of Medicine, Louisville, 1875, for several years resident physician at State Hospital for the Insane No. 1, Fulton, Mo., who was under treatment for cancer of the neck, died suddenly in St. Louis, October 24, aged 75.

Charles E. Jackson, M.D. Jefferson Medical College, Philadelphia, a contract surgeon, U. S. Army, recently returned from Manila, died at the home of his parents in Massillon, Ohio, October 24, from sepsis, contracted during a surgical operation, aged 40.

James C. Merrill, M.D. University of Pennsylvania, Philadelphia, 1875, major and surgeon, U. S. Army, who had been connected for several years with the Army Medical School, Washington, D. C., died at his home in that city, October 27.

Asa B. Gardner, M.D. University of Louisville, Ky., 1874, ex-president of the Texas State Medical Association, died at his home in Bellville, Texas, from Bright's disease, October 22, after an illness of eighteen months, aged 50.

William Young, M.D. University of Glasgow, Scotland, 1842, said to have been the last surviving charter member of the New York Academy of Medicine, died at his home in Cold Spring, N. Y., October 26, aged 82.

Joseph Senay, M.D. Harvard Medical School, Boston, 1893, a member of the Massachusetts Medical Society, died at his home in Salem, Mass., from consumption, October 20, after a long illness, aged 34.

Henry A. Cayley, M.D. Ecole de Medecine et de Chirurgie, Montreal, 1890, Butte, Mont., died at St. James' Hospital, Butte, October 24, twelve days after having been shot during a quarrel, aged 34.

Charles M. Strickler, M.D. Medical College of Virginia, Richmond, 1892, died at West Rockingham, Rockingham County, Va., October 28, from typhoid fever, after an illness of four weeks.

Hubert Sleeper, M.D. Dartmouth Medical College, Hanover, N. H., 1860, who retired from practice about fifteen years ago,

died at his home in Meriden, N. H., October 22, aged between 65 and 70.

Marion B. Carter, M.D. University of Pennsylvania, Philadelphia, 1859, Richmond, Va., died at the home of his sister in that city, October 28, from pneumonia, aged 66.

Robert W. Murphy, M.D. Cooper Medical College, San Francisco, 1897, committed suicide by shooting himself through the head, October 21, while despondent, aged 28.

Henry C. Matthews, M.D. University of Vermont, Burlington, 1870, Brooklyn, N. Y., died suddenly from apoplexy, October 22, at Clifton Springs, N. Y., aged 61.

William J. W. Funnell, M.D., for half a century a practitioner of Milford, Del., died at his home in that place, October 19, after a long illness, aged 78.

Luke H. F. J. Masson, M.D. Faculté de Medecine, Paris, France, 1894, for several years a practitioner of San Francisco, died recently in Paris, aged 34.

Benjamin Lee Bird, M.D. University of Maryland, 1864, died near Leeland, Prince George County, Md., October 30, after eight weeks' illness, aged 60.

Ernest G. Carleton, M.D. College of Physicians and Surgeons, New York, 1892, Morenci, Ariz., dropped dead on the street, October 20, aged 37.

Erastus B. Bills, M.D. Yale University, 1854, a resident of Durant, Iowa, for 47 years, died suddenly at his home in that place, October 16, aged 74.

J. Franklin Appell, M.D. Harvard Medical School, Boston, 1866, died after a lingering illness, October 20, at his home in Lake City, Fla.

M. J. Belden, M.D. died at his home in Maquoketa, Iowa, October 27, from paralysis, after an invalidism of three years, aged 70.

Henry H. Lynch, M.D. New York University, 1878, died at his home in Jersey City, N. J., October 13, after a lingering illness.

James W. Davis, M.D. University of Tennessee, Nashville, 1888, died from fever at his home in Fayetteville, Tenn., October 24.

James D. Wade, M.D. New York University, 1866, of Williamsburg, N. Y., died suddenly from heart disease, October 21.

Keith Fonde, M.D. Medical College of Alabama, Mobile, 1894, of Citronelle, Ala., died in Mobile, October 10, aged 34.

John N. Greene, M.D. University of Michigan, Ann Arbor, 1889, died at Leslie, Mich., October 23, aged 51.

Deaths Abroad.

Prof. Albert Sigel, director of the Olga Sanatorium at Stuttgart, aged 62.—**Dr. A. Castro**, professor of surgery, and **Dr. M. G. del Solar**, professor of hygiene, at Buenos Ayres.—**Dr. Massoni**, interne in the hospital at Philippeville, Algiers, probably senior of all the internes in the world, as he was in his ninetieth year.—**Dr. A. Schwendt**, privat docent of laryngology and otology at Basle, October 12.—**Dr. J. Bockendahl**, professor of medical jurisprudence at Kiel, October 16, in his seventy-seventh year.—**Dr. W. Schwanert**, professor of chemistry and pharmacy at Greifswald, October 17, in his seventy-fifth year.

Dr. L. Laroyenne, professor of gynecology at Lyons, died there October 15, in his seventy-second year. His principal work has been on pelvic suppurations, surgery in children and various questions in obstetrics and gynecology. His intra-peritoneal method of hysterectomy is well known. He was president of the International Congress of Gynecology at Amsterdam in 1900 and of various local organizations.

Dr. H. Eulenberg, a prominent German authority on matters of hygiene, died at Bonn in October, aged 88. He was the founder of the *Correspondenzblatt* and of the *Archiv für Psychiatrie*, and was one of the editors of the *Vierteljahrsschrift für gericht. Med.* for eighteen years.

Manuel Carmona y Valle, M.D., City of Mexico, director of the College of Medicine in that city, died at his home in the City of Mexico, October 23.

IN TAPPING the chest in fat subjects, it is well to remember that a line drawn horizontally from nipple around the chest passes over the sixth intercostal space, the sternum and the midline.

Miscellany.

Baccelli on Malaria Without Hematozoa to be Found in the Blood.—In a recent address Baccelli observed that the theory in regard to mechanical injury caused by malaria germs is untenable. Severe malarial fevers frequently occur in which it is impossible to discover the hematozoa in the blood in the first few days. In other cases they appear, but in such scanty numbers that there can be no connection between the quantity of the germs and the severity of the symptoms. The parasites may also exist in the blood in large numbers, but if they have not attained the phase of sporulation or segmentation they are not febrigenic *per se*. One can die of malarial infection without the familiar forms of the hematozoon being found in the blood. He knew a young privat docent who was working in a laboratory with several professors whose names are famous. The young man was seized with a subcontinuous fever, but as his blood was constantly free from any trace of hematozoa the hyperscientific professors attributed his illness to anything rather than to malaria and he was progressing from bad to worse until an outside friend insisted on his taking quinin and he was promptly restored to health. Golgi denied the possibility of such cases, but Baccelli succeeded in convincing him by numerous examples that patients will die of malaria, with no hematozoa in the blood, if they are not given quinin. Golgi in a recent letter confessed that the "clinic had conquered the theorist." The clinicians of to-day can not be made to believe that malaria is contracted exclusively from mosquito bites, Baccelli observes. Both he at Rome and Gerhardt at Berlin have reproduced malaria in a healthy subject by inoculating him with blood from a malarial patient, even to the special types of the malarial fever. Mosquitoes had nothing to do with these experiments. The intravenous application of quinin is now in current use in Italy. Baccelli reported in 1900 30 cases of pernicious malaria all cured by this means. Five died out of sixteen treated by subcutaneous injection of the quinin.

Medical Organization.

No Change in Qualification for Membership.

Immediately after the Saratoga meeting of the American Medical Association, the newspapers and a few medical journals contained accounts of changes made in regard to admission of members, which, judging from the letters that have been and are still being received at this office, have been believed by many. These accounts stated that hereafter homeopaths, eclectics, etc., were to be admitted, and that all opposition to sectarian system of practice was at an end. The American Medical Association neither made any changes nor were any suggestions regarding the matter brought up for consideration. The regulation regarding membership is left to the state and territorial associations as it always has been. Many of these, however, have recently modified their constitutions, admitting to membership those who have practiced sectarian medicine, provided they renounce all allegiance to sectarianism. The by-law of the Michigan State Medical Society, published last week, covering admission to membership, says: "Every reputable and legally registered physician, who is practicing, or who will agree over his own signature to practice, non-sectarian medicine only, and to sever all connection with sectarian colleges, societies and institutions, shall be entitled to membership." This slightly modifies Section 5, of Chapter XII of the Constitution for State Societies, as prepared by the Committee on Organization of the American Medical Association, which is as follows:

"Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this association and to the American Medical Association, every reputable and legally registered physician who is practicing, or who will agree to practice, non-sectarian medicine shall be

entitled to membership. Before a charter is issued to an county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member."

Already a considerable number of those who had formerly practiced sectarian medicine have openly renounced allegiance to any school and have associated themselves with regular societies.

State Medical Society Lecturers—A Factor in Organization.

Any real organization of the medical profession, state must rest on the pleasure and profit it actually re the individual physician. That state will soonest have best organization which can convince every individual that is working for his interest. Too often the individual physician has been the victim of "suckers" who have extracted his blood without adequate return. If he has not suffered himself, he has observed the operation on some of his fellows, and so is disinclined to submit to a similar procedure. But in the scheme of organization, whose great apostle is Dr. J. N. McCormack of Bowling Green, Ky., an honest effort is made to inaugurate mutual helpfulness as the bond of organization.

As to the ways by which this shall be manifested, there is ground for honest difference. But once the principle be accepted, details readily follow. To suggest a new way is the object of this note. It is in brief the appointment of a corps of lecturers by the state society, who shall give one or more lectures before county societies, at such time as may be agreed on.

To the local society will thus come a fresh face, a new teacher, along other lines than is usual. To the profession of the state, outside medical colleges will come the opportunity to speak and talk with fellow physicians and the reputation of being selected by the state society for this purpose. This will utilize some of that restless energy which is likely planning a new medical college. The state society will thus indicate its interest in the local societies. The state and local society and the lecturer are benefited, and forces which otherwise were wasted or worse are utilized for the general betterments.

As the members of the college faculties are already sufficiently well known it may safely be left to the local societies to invite these when so desired.

In a brief space it is impossible to elaborate the plan, but if its value be granted details are readily arranged so that abuses would be prevented, and the largest effectiveness secured.

Thus the councilor of each district would be the person whose advice would be invaluable in knowing the proper lecturers for the several counties in his district, and all the councilors could safely be entrusted with minor details.

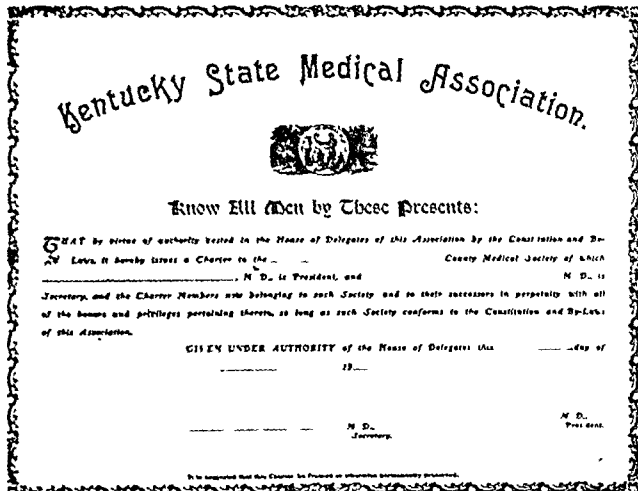
The nearer the lecturer was to the society he was to address the less the traveling expenses and loss of valuable time. The selection of, say two lecturers for each live county society, would make it possible to arrange from two to four lectures at some convenient season. Probably it might be more convenient to have two of these on one day. This is a minor matter, however, after the acceptance of the general principle that thus the state society could increase its solidity with its individual members.

There is nothing in the plan that forbids the securing of more distinguished than found in any district, for some of the meetings. Nor does it encroach on the activities of the individual members in writing and discussing papers. It simply proposes to broaden the old methods of securing to the individual post-graduate instruction, within his own county. It proves that the state society is putting forth additional effort for the benefit of all its members, and so stimulates them to make fitting response. It gives those able and willing to teach a chance, without starting a new college. It seeks to increase the training of those in the field, rather than augment the present overcrowding by the making of new physicians. It is the writer's belief that state organization would be materially promoted by the tactful administration of post-graduate instruction in each county society along the lines suggested.

LEARTUS CONNOR, Detroit.

Charters for County Societies.

We have received several requests for information in regard to how blank charters should be made out. We reproduce below the charters gotten up and used by the Michigan State Medical Society and the Kentucky State Medical Society.



The small type in the Kentucky charter reads:
 "That by virtue of authority vested in the House of Delegates of this Association by the Constitution and By-laws, it hereby issues a Charter to the _____ County Medical Society, of which _____ M.D. is President, and _____ M.D. is Secretary, and the Charter Members now belonging to such Society, and to their successors in perpetuity, with all of the honors and privileges pertaining thereto, so long as such Society conforms to the Constitution and By-laws of this Association."

Michigan State Medical Society.



Know All Men by these Presents:

That by virtue of authority vested in the House of Delegates of the Michigan State Medical Society, it hereby issues this Charter to the _____ County Medical Society (constituting it a branch of the State Society), giving its Charter Members and their successors in perpetuity all the honors and privileges pertaining thereto, so long as said Society conforms to the Constitution and By-Laws of the State Society.

Given Under Authority of the House of Delegates, this _____ day of _____ 19__

The small type in the Michigan charter reads:
 "That by virtue of authority vested in the House of Delegates of the Michigan State Medical Society, it hereby issues this Charter to the _____ County Medical Society (constituting it a branch of the State Society), giving its Charter Members and their successors in perpetuity all the honors and privileges pertaining thereto, so long as said Society conforms to the Constitution and By-laws of the State Society."

The Vermont State Medical Society.

The Vermont State Medical Society has increased its membership 60 per cent. during the past year, according to the secretary, Dr. Geo. H. Gorham.

Lapeer County (Mich.) Medical Society.

The physicians of Lapeer County met at Lapeer, October 15, and organized this society, to be in affiliation with the Michigan State Medical Society. Dr. Hugh D. McColl, Lapeer, was elected president; Dr. William J. Kay, Attica, vice-president; Dr. Herbert E. Randall, Lapeer, secretary, and Dr. George W. Stone, Metamora, treasurer.

Clay-Becker (Minn.) Medical Society.

At a meeting of the physicians of Clay and Becker counties, at Moorhead, October 23, this society was organized under charter by the Minnesota State Medical Society. The following officers were elected: President, Dr. Frank H. Alexander, Barnesville; vice-president, Dr. Leonard C. Weeks, Detroit, and secretary and treasurer, Dr. Leon W. Hyde, Moorhead.

Societies.

COMING MEETINGS.

Oklahoma Territory Medical Association, Guthrie, Nov. 11, 1902.
 Southern Surgical and Gynecological Association, Cincinnati, Nov. 12-14, 1902.
 Tri-State Medical Society of Mississippi, Arkansas and Tennessee, Memphis, Tenn., Nov. 11-13, 1902.
 Indian Territory Medical Association, Muskogee, Dec. 2-3, 1902.
 Western Surgical and Gynecological Association, St. Joseph, Mo., Dec. 29, 1902.

Orange Mountain (N. J.) Medical Society.—At the meeting of this society at Orange, October 25, the address of the evening was delivered by Dr. William Osler, Baltimore, on "Errors in the Diagnosis of Typhoid Fever."

Tri-State Medical Association of Mississippi, Arkansas and Tennessee.—The nineteenth annual meeting of this association will be held at Memphis, Tenn., November 11, 12 and 13, under the presidency of Dr. James B. McElroy, Stovall, Miss.

Fond-du-Lac County (Wis.) Medical Society.—This society, originally organized in 1868, was reorganized, October 22, at Fond-du-Lac, with Dr. John S. Hall, Ripon, president; Dr. J. Henry McNeel, Fond-du-Lac, vice-president, and Dr. Flora A. Read, Fond-du-Lac, secretary and treasurer.

Sanilac County (Mich.) Medical Association.—This association was organized at Carsonville, October 17, with the following officers: Dr. Harvey W. Smith, Carsonville, president; Dr. Thomas S. Kingston, Crosswell, vice-president, and Dr. George S. Tweedie, Sanilac Center, secretary and treasurer.

Northwestern Iowa Medical Association.—This association met in annual session at Carroll, October 16, and elected Dr. James E. Conn, Ida Grove, president; Dr. William J. Findley, Sac City, vice-president; Dr. Daniel W. Wheelwright, Odebolt, secretary, and Dr. Daniel J. Townsend, Lohrville, treasurer.

Fulton County (Ill.) Medical Society.—At the annual meeting held in Canton, October 7, Dr. William F. Roberts, Norris, was elected president; Dr. Paul S. Scholes, Canton, first vice-president; Dr. William Plummer, Farmington, second vice-president, and Dr. Frank M. Harrison, Bryant, treasurer. Dr. David S. Ray, Jr., Cuba, was re-elected secretary.

San Angelo District (Texas) Medical Society.—At the meeting of this society in San Angelo, October 14, Dr. Samuel L. S. Smith reviewed in his presidential address the history of medical practice in San Angelo. Dr. Fortunatus B. Magruder was elected president; Dr. L. C. G. Buchanan, secretary, and Dr. Charles T. Cooper, treasurer, all of San Angelo.

Red River Valley District and County (Minn.) Medical Association.—This association was organized by a number of Red River Valley physicians who met for this purpose at Crookston, October 24. Dr. Charles E. Dampier, Crookston, was elected president; Dr. George S. Wattam, Warren, vice-president, and Dr. Halvor Holte, Crookston, secretary and treasurer.

Iowa State Association of Railway Surgeons.—This association held its ninth annual meeting at Des Moines, October 22 and 23. Des Moines was selected as the next place of meeting and the following officers were elected: Dr. Ira K. Gardner, New Hampton, president; Dr. Benjamin Thompson, Tama, vice-president; Dr. Albert B. Deering, Boone, secretary, and Dr. William J. Williams, Adel, treasurer.

Idaho State Medical Society.—This society met at Moscow, October 9 and 10. The principal business transacted was the formation of the North Idaho Medical Society, including the five northern counties in a district organization, which it is expected will hold semi-yearly meetings. The following officers were elected: President, Dr. Charles L. Gritman, Moscow; vice-president, Dr. Isaac S. Collins, Burke, and secretary, Dr. C. D. Parsons, Moscow.

Santa Fe Railway Medical and Surgical Society.—At the annual meeting of this society in Topeka, Kan., October 11, the following officers were elected: President, Dr. William L. Smith, Streator, Ill.; vice-presidents, Drs. Daniel L. Woods, Dighton, Kan.; James H. Wroth, Albuquerque, N. M.; Emmett C. Chapman, Fort Madison, Iowa, and Dr. George W. Miel, Denver, Colo.; secretary, Dr. Pascal W. McConnell, Topeka, and treasurer, Dr. John D. Freeman, Topeka.

Big Four Railway Surgeons' Association.—The ninth annual meeting of the surgeons of this railway system was held in Columbus, October 16. The following officers were elected: Dr. Samuel L. Ensminger, Crawfordsville, Ind., presi-

dent; Drs. Cyrus W. Chidester, Delaware, Ohio; Charles F. Smith, Kankakee, Ill.; Fred R. Belknap, Niles, Mich., and Thomas W. Moorhead, Terre Haute, Ind., vice-presidents, and Dr. Thomas C. Kennedy, Shelbyville, Ind., secretary and treasurer.

Brainard District (Ill.) Medical Society.—At the regular meeting of this society, held in Lincoln, October 23, the leading question for general discussion was: "What Is to Become of the Brainard District Medical Society?" It was the unanimous opinion that the society organization should be continued. It was voted to erect a suitable stone over the grave of Dr. Katherine Miller, who served so many years as secretary of the society. The next meeting will be held in Mason City in January, 1903.

New Haven County (Conn.) Anti-Tuberculosis Association.—This association has been incorporated by Drs. Oliver T. Osborne, Henry L. Swain, Francis Bacon, Frank W. Wright and John P. C. Porter of New Haven; Dr. Carl E. Munger, Waterbury, and others, without capital stock. The object of the association is to establish and maintain in New Haven County a sanitarium for the treatment of curable cases of pulmonary tuberculosis, and to encourage and aid all efforts put forth for the suppression and prevention of the disease.

Thurber Medical Association.—This association held its annual meeting at Milford, Mass., October 16. Dr. Nathaniel C. B. Haviland, Williston, delivered the presidential address on "The Physician; What He Owes to Himself," and resolutions were adopted on the death of Dr. George King, Franklin. The following officers were elected: Dr. Charles B. Hussey, Franklin, president and orator; Dr. Emmet W. Barry, Whitinsville, vice-president; Dr. Ambrose J. Gallison, Franklin, secretary; Dr. N. W. Sanborn, Bellingham, treasurer, and Dr. Christopher D. Albro, Milford, librarian.

Park Region District and County (Minn.) Medical Society.—Nearly a score of physicians met in Fergus Falls, October 22, to organize this society. All physicians who practice non-sectarian medicine are eligible. The territory includes Wilkin, Grant, Douglas and Otter Tail counties. The object is fraternity and improvement. The following officers were elected: Dr. Thomas N. McLean, Fergus Falls, president; Dr. John Livingston, Pelican Rapids, vice-president; Dr. Eugene A. Hensel, Alexandria, secretary, and Dr. Walter E. Truax, Breckenridge, treasurer.

Franklin County (Pa.) Medical Society.—This society held its seventy-seventh annual meeting at Wolf Lake, Chambersburg, October 14. The following officers were elected: President, Dr. A. Barr Snively, Waynesboro; vice-presidents, Drs. J. Burns Amberson, Waynesboro, and Oliver P. Stoeck, Roxbury; recording secretary, Dr. John J. Coffan, Scotland; corresponding secretary, Dr. H. Clay Devilbiss, Chambersburg; treasurer, Dr. David Maclay, Chambersburg, and censor, Dr. Theo. H. Weagley, Marion. The meeting closed after a banquet in the evening, at which Dr. T. H. Weagley presided as toastmaster.

International Association of Hospital Superintendents.—This association held its fourth annual session in Philadelphia, October 14, 15 and 16. "Hospital Organization," "Hospital Construction," "Hospital Reports and Records," "Dispensary Service," and "Hospital Equipment" were among the subjects discussed. The association declared itself against the use of hospitals to pay political debts. Two papers were read on politics in hospitals, and a general discussion followed. Papers and speakers equally condemned the practice, which, they said, was not uncommon among politicians, of redeeming promises by placing henchmen in hospitals. The officers elected were: President, John Fehrenbach, superintendent of the Cincinnati Hospital, Cincinnati; vice-president, Dr. Charles O'Reilly, superintendent General Hospital, Toronto, Canada; secretary, Daniel D. Test, superintendent Pennsylvania Hospital, Philadelphia; treasurer, A. W. Shaw, superintendent Harper Hospital, Detroit. It was decided to hold the next meeting in Cincinnati, October 20, 21 and 22, 1903.

CONFERENCE OF STATE AND PROVINCIAL BOARDS OF HEALTH OF NORTH AMERICA.

Seventeenth Annual Meeting, held at New Haven, Conn., Oct. 28 and 29, 1902.

Under the Presidency of Dr. H. M. Bracken, Minneapolis.

Report of the Committee on Communicable Diseases.

Dr. B. STANTON, Cincinnati, in the absence of the chairman, presented the following list of diseases believed to be com-

municable, dangerous to the public health and such as boards of health may properly endeavor to prevent: Typhoid fever, typhus fever, smallpox, chicken-pox, measles, scarlet fever, whooping cough, diphtheria, influenza, cholera, yellow fever, bubonic plague, mumps, German measles, glanders, hydrophobia, malaria, epidemic cerebrospinal meningitis, pneumonia, puerperal fever, epidemic dysentery, erysipelas, beri-beri, ankylostomiasis, leprosy, tetanus, anthrax, actinomycosis, trichinosis, trachoma, scabies, syphilis and gonorrhea.

After considerable discussion this report was adopted. The conference also discussed and adopted a new constitution.

Production and Control of Vaccine Virus and Antitoxins.

Dr. U. O. B. WINGATE, Milwaukee, first discussed the commercial element relative to vaccine virus, antitoxin, etc. In his experience there had been considerable difficulty with the vaccine virus. Whenever an outbreak of smallpox occurred it was a serious thing to get a supply of virus to use and then find it had no effect, and those who were exposed, who might be protected by successful vaccination, were not protected because the virus was impure. He thought some measure should be taken whereby, if vaccination was urged, a sufficient amount of protection would be given to the public, so as to obtain its confidence. He quoted from Theobald Smith, who refers to the practice that exists on the Continent. Each state or state division assumes the responsibility of preparing the vaccine virus itself, and the national government appoints inspectors, provides vaccine plants, under whose supervision the virus is prepared, tested and officially stamped, the same being done with regard to antitoxin in Germany.

As we have now a national public health organization, well equipped with experts, Dr. Wingate thought it would be practicable to have agents appointed to inspect the products of vaccine virus, and perhaps the other products, or some means might be adopted by which we could say to the public that these products are safe to use, and that they are efficacious. He did not think this could be said now of these products at all times. He believed that any recommendations which might emanate from the conference would have considerable influence in establishing a system of this kind.

Massachusetts had been producing its own antitoxin for a number of years, with good results. This is certainly a step in the right direction.

Some Questions To Be Answered in Dealing with Smallpox.

Dr. C. O. PROBST, Columbus, Ohio, stated that in Ohio since the present epidemic began, 14,224 cases of smallpox had been reported, with 376 deaths. This was probably considerably short of the actual number of cases, for many had doubtless occurred that were never recognized or reported as smallpox.

The main difficulty at present is from the people, especially the merchants, who are unwilling to accept the diagnosis of smallpox made by the local physicians. The Ohio State Board of Health appointed ten experienced physicians as medical inspectors, paying them \$10 a day and expenses. When the diagnosis of smallpox was made locally, the board insisted that the local authorities should accept it, and if called on to send someone to verify the diagnosis, the local authorities were made to pay the expense. Should the state or community pay this expense? The community usually receives the greater part of the benefit. A prompt diagnosis may prevent an epidemic. If the disease is not recognized as smallpox, or not treated as such, it is carried to other, perhaps distant, communities. Dr. Probst suggested a basis of division to be made between state and local responsibility in these cases.

Dr. Probst thought the State Board of Health should have authority to modify or set aside a local quarantine regulation, but it should use this power only in urgent cases.

He presented a plan whereby a state board of health might possibly give reasonable assurance of purity of vaccine virus. The Ohio board contemplated putting such a plan into operation, and was holding it in abeyance, hoping to have it criticized at this meeting. Two vaccine propagators, and a third might be added, are willing to enter into this arrangement. They will furnish once a month, or as often as necessary,

samples of two or three lots of vaccine virus. The size of a lot would depend on the general demand, and might be the product of one heifer, or the mixed product of several inoculated on the same day. The lots would be numbered. A sample of each lot would be examined for the number of bacteria and presence of pus organisms. Possibly a test would be made for the tetanus bacillus. The methods of examination would be published and announced, when the sample passed muster, that lot so-and-so had been examined, produced by such-and-such propagator, and the sample had been found free from pathogenic organisms. The propagator on his side would agree that any person in Ohio ordering virus of a particular lot should receive that virus and no other, unless notified to the contrary. He would not be bound to hold this virus, to his loss, specially for the Ohio trade, but would endeavor to keep a supply of it on hand.

This plan has suggested itself to the board of Ohio because of the great opposition to vaccination, occasioned largely by the lack of public confidence in the purity of commercial vaccine. The exaggerated statements of the bad results from vaccine in Cleveland, and the report of several deaths there from tetanus credited to vaccination even by the medical profession, made it highly desirable that the people of Ohio should in some way be given assurance of the purity of virus used.

DISCUSSION.

DR. SAMUEL W. ABBOTT, Wakefield, Mass., in opening the discussion on these two papers, stated that the State Board of Health of Massachusetts had examined the products of several private producers of antitoxin in 1896, and found some of them absolutely worthless, as sold in open market. Speaking of the experience of his own state on the topic of antitoxin production, he said, 1. about 180,000 packages had been produced in the nearly eight years of production up to the present date. 2. Nearly one-quarter million dollars had been saved to the state, the principal portion of which would have gone out of the state to private producers. 3. Several thousand lives had been saved which might otherwise have been lost through inability to pay the cost of life saving. 4. No untoward accidents or injuries reported in the state from the use of antitoxin in the eight years. 5. All parties absolutely satisfied with state production, including the physicians and boards of health who used the product, and the people for whose benefit it was used, and for the saving of their lives and those of their children. No one was discontented except the few who desire a change for commercial reasons only.

DR. H. D. GEDDINGS, Washington, D. C., said that the public, in buying antitoxin, was entitled in equity and in justice to receive what it paid for as advertised on the labels. To sell a serum represented to contain 2000 antitoxin units to the cubic centimeter, and then have it found on test to contain between 1000 and 2000 was certainly delivering goods under false pretenses.

In regard to vaccine virus, if there was on the market to-day a truly antiseptic, aseptic or germ-free vaccine virus, the hygienic laboratory of public health of the Marine-Hospital Service was not able to purchase it in open market. Samples of every virus that was obtainable were submitted to tests in the hygienic laboratory, the result of these examinations showing that none were truly aseptic or antiseptic, and that none were germ-free. He thought too much reliance had been placed on the alleged antiseptic property of glycerin.

DR. PETER H. BRYCE, Toronto, Ont., believed that vaccine virus from a commercial standpoint could be produced quite as well as by a government laboratory. In England no one handles government vaccine except the public vaccinators, who have received a certificate of efficiency from some educational vaccine establishment, of which there are twenty-five throughout England and Scotland. The public vaccinator is appointed by the government. He receives all articles from the national vaccine establishment, or as much vaccine as he proposes to use in a week.

He would not encourage the establishment of a national or federal laboratory or institute, where lymphs and serums

could be manufactured, until he was perfectly sure the work of vaccination could be put into trained, certified hands, and the work done in such a systematic routine manner that there would be no question that the lymph will be used this week or next week, when it is fresh.

DR. GARDNER T. SWARTS, Providence, R. I., said that if state boards of health were large enough and could obtain a sufficient appropriation, or the state was large enough to warrant an appropriation to carry on the manufacture and production of vaccine virus and antitoxins, it was all very well. When it came to a small state, like Rhode Island or Delaware, the amount of appropriation needed would be so small that it would be impracticable for the state to control an institution of this kind. If these products could be manufactured by the national government, he would have some assurance, but the question arose, as in the case at St. Louis, whether state boards or city boards, who were controlling these products, would not fall into the hands of political chimera, and the result would be that those who produced the virus were not responsible parties and the state might suffer as a consequence. There should be some control whereby these institutions could be subjected to inspection and their products.

DR. JOHN GUIERAS, Havana, Cuba, said that in Cuba there was a central station for the preparation of vaccine, which was sent all over the island, handled by state officials who were vaccinators, and during the last two years compulsory vaccination had been carried out, with the result that smallpox had not been able to gain a foothold in Cuba, although the island was surrounded by countries in which smallpox was prevalent.

Report on Vaccination.

The whole subject was referred to a committee, consisting of Drs. Wingate, Probst and Bryce, which subsequently presented the following report, which was adopted:

1. That vaccination may be defined as follows: An inoculation by scarification, puncture or injection beneath the epidermis, of a vaccine which produces, with some constitutional disturbance, the typical vaccine vesicle, which leaves, after the pock has healed, its characteristic scar.

2. That in order to obtain the most satisfactory results, vaccine must be produced either by federal, state, or provincial officials, or by private producers under the closest supervision of qualified government officials.

3. That for the greatest protection against smallpox, state and provincial laws should provide machinery whereby certified public vaccinators must be appointed for the systematic vaccination by house-to-house visitation, of all children born during any year, and at public stations or otherwise of such others as circumstances may make necessary.

4. That the evidence of successful vaccination of all school-children naturally forms a part of any system of public vaccination and certificates of such should be accepted only when signed by a municipal or local health officer.

5. That in order that the best results may be obtained, it is essential that medical colleges should be urged to provide for thorough instruction in the theory and practice of vaccination, and that all licensed physicians must hold certificates of having had practical instruction in the operation of vaccination in medical colleges, dispensaries, or public vaccine stations.

Election of Officers.

The following officers were elected for the ensuing year: President, Dr. Irving A. Watson, Concord, N. H.; vice-president, Dr. John Guiteras, Havana, Cuba; secretary, Dr. Gardner T. Swarts, Providence, R. I.; treasurer, Dr. James A. Egan, Springfield, Ill.

The time and place for holding the next annual conference were left to the executive committee.

(To be continued.)

THE NEW YORK STATE MEDICAL ASSOCIATION.

Nineteenth Annual Meeting, held in New York City, Oct. 20-23, 1902.

President, Alvin A. Hubbell, M.D., Buffalo, in the Chair.

The first session was an executive one. The important features have already appeared in THE JOURNAL, i. e., the acceptance of the report of the joint committee on conference of the two state medical organizations, the adoption of a plan of associated medical defense for the benefit of members sued for alleged malpractice, and the annual election of officers.

The Pathogenesis of Eclampsia.

DR. FREDERICK P. HAMMOND, New York City, read this paper on the second day. He reviewed the various theories advanced to explain the occurrence of eclampsia, and pointed out the necessity of judicious prophylaxis. The morning meal of the pregnant woman should consist of an abundance of fresh fruit, with weak tea, coffee or water, but no meat. Only at the midday meal should red meat be permitted. When headache, disturbance of vision, or vertigo supervene, the patient should be at once put on a diet consisting of milk with some shell-fish broths, and meat extracts should be carefully avoided. The judicious use of cathartics, with proper exercise and warm baths twice a week formed an important part of the régime of pregnancy. To avert an attack of eclampsia when imminent, he thought it was best to give chloral hydrate.

DR. WILLIAM E. SWAN, Saratoga Springs, read a paper on "Bacterial Flora of the Vaginal and Cervical Canal in Health." If a healthy vagina becomes infected by virulent organisms it will rid itself of these in from 6 to 36 hours, but if Nature's process is interfered with by the use of antiseptic douches this cleansing period may be extended to 20 hours or even three days.

Treatment in Gynecology from a Medical Standpoint.

DR. MARY GAGE-DAY, Kingston, said that in the local treatment of women prior to the menopause she found iodine, ichthyol, glycerin and boric acid specially valuable, the ichthyol being particularly well suited for those cases in which tenderness was a prominent feature. For women past the menopause the following mixture seemed better adapted: Irish moss, half an ounce; glycerin, two drams; alcohol, four ounces; boric acid, two ounces; water sufficient to make one quart. When properly made this was a bland mixture having marked healing power.

DR. J. RIDDLE GOFFE, New York City, said that the proper treatment of uterine fibroids was immediate removal by operation, whether the tumor was large or small. Most cases of fibroids complicating pregnancy result in a normal delivery at term. The electrical treatment of fibroids is not only inefficient but far from being harmless.

The Repair of Lacerations of the Pelvic Floor.

DR. JAMES HAWLEY BURTENSHAW, New York City, questioned if the majority of modern operations on the perineum really restored the pelvic floor to its normal condition. The essential point is to freshen the edges of the torn muscles and closely approximate them by sutures. Special stress was laid on the important part played by the fascia of the levator ani muscle.

Etiology of Colds.

DR. JAMES J. WALSH, New York City, opened the symposium on colds with this paper. He insisted that cold was only a predisposing factor, and that the chief element was a microbic infection. Going quickly from a heated theater to the cold air outside causes congestion of the upper air-passages and affords a good opportunity for an attack by the numerous microbes that had found lodgment while in the hot and crowded auditorium.

DR. GEORGE F. COTT, Buffalo, described the symptomatology.

The Treatment of Colds.

DR. A. ALEXANDER SMITH, New York City, said that if the person developing a cold had a body temperature of 100 F. or over, he should be kept in the house, or preferably in bed. At the outset, a moderate dose of quinin and Dover's powder is often useful, and in the early stage of a coryza the well-known "rhinitis" tablets may be used to advantage up to the point of producing a slight physiologic effect from the belladonna which they contain. In lithemic subjects the so-called alkaline treatment often acts admirably. This consists in giving one dram of bicarbonate of sodium in half a glass of water, flavored with a few drops of lemon juice, and repeating this dose in one hour. Ten grains of salicylate of sodium, repeated in one hour, and thereafter in doses of five grains every five or six hours, often produce a good result, provided the stomach bears it well. Where there is an excess of mucopurulent secretion, creosote or guaiacol carbonate should be given in small doses.

For children under twelve years of age the author preferred to treat colds by giving small doses of tincture of aconite at frequent intervals. Where there was a tendency to recurrence, cod-liver oil, small doses of quinin or the vegetable bitters were appropriate.

DR. ALFRED STENGEL, Philadelphia, read a paper on "The Newer Relation of the Pancreas to General Medicine." He said that no reliance was to be placed on fatty diarrhea as an indication of disease of the pancreas, and glycosuria was by no means a constant symptom.

The Present Position of Gallstone Surgery.

DR. WILLIAM WOTKINS SEYMOUR, Troy, read a paper which will appear in THE JOURNAL.

A Study of the Indications of Nephropexy.

DR. AUGUSTIN H. GOLLET, New York City, insisted in this paper that nephropexy was indicated whenever the kidney was sufficiently prolapsed to be entirely below the border of the last rib in front. He had done 139 nephropexies on 112 patients without a fatality.

The Relation of Obesity to Impotence.

DR. HEINRICH STERN, New York City, presented in this paper some statistics that he had gathered from personal observation bearing on this subject. They were, however, simply suggestive. The non-performance of the sexual functions might, he thought, by preventing expenditure of certain body material, facilitate the fattening process.

Unrecognized Toxic Insanities.

DR. T. D. CROTHERS, Hartford, Conn., asserted that a large percentage of the insanities occurring in the higher circles were both directly and indirectly due to the use of drugs and spirits, though often this cause was unrecognized until the later stages.

Strangulated Hernia in Children Under One Year.

DR. W. B. REED, Rome, N. Y., reported on the third day of the meeting a successful herniotomy on a male infant 27 days old. He had been unable to find on record more than eight other cases of strangulation occurring under one year of age.

DR. A. J. OCHSNER, Chicago, remarked that many of these cases were evidently not reported, for he felt that his own experience would show as many cases as the author had found recorded. Children certainly bear herniotomy very well.

Local Anesthesia in Radical Cure for Inguinal Hernia.

DR. J. A. BODINE, New York City, presented in this paper an experience with 48 cases of inguinal hernia operated on under local cocaine anesthesia. It is important to specially cocaineize the main nerve trunks. Of these three, the iliohypogastric is the easiest to recognize. The needle should be introduced in such a way just beneath the scarf epithelium of the integument as to produce edematization and acute anemia of the skin. In none of his cases was more than half a grain of cocaine used. It was interesting to note that if a cocaine solution were boiled for only a minute or two it would suffer no deterioration.

Radical Operations for the Cure of Cancer of the Stomach.

DR. WILLIAM J. MAYO, Rochester, Minn., on reviewing the literature, found that from 5 to 8 per cent. of the cases operated on radically should be expected to survive three years. Gastro-enterostomy usually prolongs life about three months, and radical operation gives an increase of fourteen months over the unoperated. If the diagnoses are made sufficiently early these statistics should be greatly improved, as the stomach is a favorable organ, having a large blood supply from several sources. He would especially warn against wasting precious time in prolonged attempts at making accurate diagnoses by tests of the stomach contents. Inflation of the stomach is an aid to diagnosis, but should be done by means of a Davidson syringe and not by swallowing the two halves of a Seidlitz powder, as the latter is a dangerous procedure. In St. Mary's Hospital during the past ten years 213 operations had been done on the stomach, 126 for non-malignant disease, with a mortality of about 5 per cent., the 92 for malignant disease yielding a mortality of 10 per cent. He had himself done 20 pylorotomies with 2 deaths.

Surgery of the Stomach for the Relief of Non-Malignant Pathologic Conditions.

DR. A. J. OCHSNER, Chicago, read this paper. He said that he had himself operated on 27 patients for non-malignant disease of the stomach. The prognosis after perforation of a gastric ulcer is always bad, even though the operation be undertaken within twelve hours; hence it is far better to treat these cases surgically before the occurrence of perforation. It has been found that serious ulceration of the stomach takes place only when there is faulty drainage, and that as the stomach dilates the shape of the organ becomes altered in such a way as to still further interfere with drainage. Proper permanent drainage is best effected by an anastomosis between the lowest point in the stomach and the duodenum, about 40 cm. from the point at which the duodenum issues through the mesentery of the transverse colon. It is ordinarily not necessary to excise the ulcer.

President's Address.

DR. ALVIN A. HUBBELL, Buffalo, took for his theme, "Reflections on Some of the Purposes and Work of the New York State Medical Association." After sketching the work of the association in general, he took up its loyalty to the Code of Ethics of the American Medical Association. This code, he said, placed no restrictions on any right action, yet it was necessary, for experience had demonstrated that it was unsafe to leave everything to an unwritten code.

Pathology and Bacteriology of Typhoid Fever.

DR. GEORGE BLUMER, Albany, pointed out that the earlier failures in attempting to isolate the typhoid bacillus from the blood arose from the fact that the technic was not such as to offset the germicidal action of the blood. These bacilli could now be demonstrated in the rose spots. As a rule they did not appear in the urine until the end of the second week, and were observed in about 29 per cent. of the cases. The typhoid bacilli had been found in the bile, usually reaching that secretion through the blood.

The Serum Reaction in Typhoid Fever.

DR. THOMAS HASTINGS, New York City, dealt with this part of the subject from a statistical point of view, and the figures which he quoted showed that positive Widal reactions, for the most part with a dilution of one in fifty, were obtained in about 95 per cent. of the cases.

Paratyphoid Fever.

DR. NATHAN E. BRILL, New York City, read this paper. He said that in his original contribution on this subject five years ago he had reported 17 cases, giving the chief clinical features of typhoid, but failing to give the Widal reaction, and had then expressed the opinion that it was a distinct disease from typhoid. Since then a good deal more had been learned about these paratyphoids. In these cases the fever usually reached its height in five days, the blood showed no leucocytosis, and the duration was a little over two weeks. The marked apathy and the extreme prostration were prominent clinical features.

DR. W. S. THAYER, Baltimore, reported five cases of arteritis and arterial thrombosis in typhoid fever.

The Modern Treatment of Typhoid Fever.

DR. W. GILMAN THOMPSON, New York City, said that our modern knowledge of the very wide distribution of the typhoid bacilli very greatly weakened the argument in favor of the administration of intestinal antiseptics. An initial dose of calomel is of benefit, but the frequent use of this drug throughout the disease is harmful and likely to cause salivation. Water should be given freely, and milk should be the chief diet, but when for any reason milk diet is not desirable, broths, egg albumin mixture and peptone preparations should be given. As soon as the temperature reaches normal or therabouts, soft-boiled eggs, junket, boiled rice and scraped beef may be successively added to the dietary. Undigested milk is as irritating as solid food. If the Brand bath treatment is employed at all, it should be in no half-hearted way, but with the chief object of stimulating the nervous system. When the temperature is 102.5 F. or over, a tub bath at 75 F. should be given for fifteen minutes, two nurses making frictions meanwhile. The speaker was positive that these tub baths were responsible

for no serious complications. When intestinal hemorrhage occurred, food should be withheld from the stomach, or some digested beef preparation given. Tincture of opium should be given by the mouth in sufficient doses to keep the patient well under its influence. Suprarenal extract was sometimes, but by no means always, of service in these cases of intestinal hemorrhage. Saline infusion would sometimes save life.

DR. ALBERT W. PRESTON, Middletown, reported an interesting case of typhoid infection, hemorrhagic typhoid pleurisy.

Advantages of Nitrous Oxid in General Surgery.

DR. H. W. CARTER, New York City, said this was the most difficult of all methods of inducing anesthesia, but the rapid and pleasant induction of narcosis, the complete recovery, the almost entire absence of vomiting or other unpleasant sequelæ and the general safety and efficiency of the method for lengthy administrations counterbalanced the expense of the method, the difficulty of its administration and the cumbersomeness of the apparatus.

A Standard Technic in Operative Surgery.

DR. EDWARD WALLACE LEE, New York City, entered a plea for greater uniformity in surgical technic to obviate the confusion which students at present experience.

DRS. A. J. OCHSNER, WILLIAM J. MAYO and J. J. WALSH, who discussed the paper, did not take kindly to the suggestions of the author, and expressed the opinion that as perfection had not yet been reached the proposed plan would hinder further progress.

Points in the Control of Emergency Hemorrhage, Both Medical and Surgical.

DR. ROBERT H. M. DAWBARN, New York City, among other points discussed, called attention in this paper to his plan of treating hemorrhage in any inaccessible part of the body by sequestering the blood in the limbs by means of a knotted towel twisted around the limb at its junction with the body. This so reduces the blood pressure as to make the patient feel faint; it is a temporary bleeding into one's own vessels, and after sufficient time has elapsed for the formation of a clot at the seat of hemorrhage, the blood is gradually allowed to return from the limbs into the general circulation. The constricting bandage should not be applied so tightly as to stop the pulse on the distal side of the bandage.

DR. F. W. HIGGINS, Cortland, said that many cases of epistaxis could be controlled by pressure with the finger on a spot situated about one-third of an inch within the anterior nares.

DR. A. J. OCHSNER mentioned as a new treatment for hemophilia the giving of four to six whites of eggs three times a day.

Pneumonia from the Bacteriologic Standpoint.

DR. A. C. ABBOTT, Philadelphia, opened the symposium with this paper. He said there was conclusive proof that the *Micrococcus lanceolatus* does produce spreading inflammatory exudates having all the characteristics of the exudate of acute pneumonia in man. There was apparently no relation between the virulence of the organism and the production of toxin.

Leucocytosis in Pneumonia.

DR. ALEXANDER LAMBERT, New York City, discussed this topic. He said that the intensity of the leucocytosis was not always in proportion to the severity of the symptoms, and that leucocytosis alone was of no value in prognosis. Mild cases usually showed a leucocytosis of 6,000 to 12,000; severe cases, 30,000 to 50,000. To be of much assistance the leucocytosis must be determined almost daily. In a study that he had made of the leucocytosis in 87 cases of acute lobar pneumonia it was found that when the leucocyte count was below 7,000, i. e., was persistently subnormal, it pointed almost invariably to a fatal termination. When resolution was delayed, the leucocytosis persisted, and when there was an extension of the pneumonic process in the same or in the other lung, the leucocytosis was increased. When empyema occurred as a complication there was apt to be a doubling of the leucocyte count.

Treatment of Pneumonia.

DR. JOSEPH W. GROSVENOR, Buffalo, concluded as follows: A mild pneumonia may easily recover without medicinal treat-

ment. Blood letting is only admissible in very robust persons having marked cyanosis and great dyspnea. Toxemia should be controlled by securing elimination of the toxins and increasing the vital resistance. Alcohol being a cardiac depressant is not useful in threatened heart failure. Serum therapy is still in an experimental stage.

The Finsen Light Treatment of Smallpox.

DR. FRANCIS P. KINNICUTT, New York, said that since 1894 the Finsen treatment of the suppurative stage of smallpox, i. e., by keeping the patient in a room from which the blue, violet and ultra-violet rays of light are excluded by the interposition of red fabric, had been given extensive trial, and with very encouraging results. The earlier the treatment was commenced the better the results, and it was essential to success that it be kept up uninterruptedly until the vesicles have all dried up.

The Roentgen Ray.

DR. EDEN V. DELPHEY, New York City, described briefly the more important pieces of apparatus in general use, and outlined the physics of the subject.

DR. CARL BECK, New York City, presented radiographs to illustrate what an important aid the Roentgen ray is in the treatment of fractures.

DR. CHARLES WARRENNE ALLEN, New York City, reported 50 consecutive cases of cancer treated by the Roentgen ray. The persons varied from 15 to 80 years; 22 were males. There were 33 cases of epithelioma of the rodent ulcer type and 10 cases of cancer of the breast, 7 of them recurrent. Only 8 per cent. were unimproved; 20 per cent. were improved, but still under treatment; 52 per cent. had been discharged as cured. The writer admitted that the α -ray might do decided injury aside from producing burns, as, for example, the production of a septicemia by the accumulation in the system of the toxins resulting from the breaking down of the tumor. The method was not to be used in all forms of cancer, and the improvement in appropriate cases is greater than could be obtained at present from any other known method.

DR. EDEN V. DELPHEY read a paper on "The Roentgen Ray in Gynecology."

DR. JOSEPH B. COOK, New York City, said that the results of α -ray examinations of the pelvis of a pregnant woman could not compare with those obtained by one skilled in obstetric palpation. It might possibly prove of value in cases of multiple pregnancy.

DR. WILLIAM JAMES MORTON, New York City, exhibited a small and comparatively inexpensive lamp which he said would do all the work of the large and complicated Finsen light. By substituting iron for carbon in the electric arc an abundance of ultra-violet rays was obtained. In the treatment of carcinoma by the α -ray he carefully avoided the use of screens, because he felt that a very wide application of this potent agent was essential to the best results.

DR. WILLIAM B. COLEY, New York City, said that after some experience in this field, he felt that the α -ray would prove chiefly useful as an aid rather than as a substitute for operation in cases of cancer. His experience had been that many of these cases recur after a short time. The application of the α -ray immediately after excision of the visible portions of a primary carcinoma seemed to him most important.

Election of Officers.

The following officers were elected for the ensuing year: President, Dr. Frederick Holme Wiggin, New York City; vice-president, Dr. William H. Thornton, Buffalo; secretary, Dr. Guy D. Lombard, New York City, and treasurer, Dr. Edward H. Squibb, Brooklyn.

OREGON STATE MEDICAL SOCIETY.

Twenty-ninth Annual Meeting, held at Portland, Ore., Sept. 10-12, 1902.

President, Dr. Charles J. Smith, Pendleton, in the Chair.
Welcome.

Mayor Williams of Portland delivered the address of welcome and spoke appreciatively of the value of the work of Oregon

physicians and of the great advances made by the medical profession during the last few years.

Outdoor Treatment of Tuberculosis.

DR. EDGAR P. HERSHEY, Denver, Colo., presented a paper on "General Treatment of Tuberculosis," in which he enlarged on the advantage of breathing the open air. There is no special climate that will cure tuberculosis. What is needed is to get out in the open air. Let the patient eat his food, and become hardened to the climate. A large number of consumptives come to Colorado for treatment. There is one kind of a climate that is good for one class of patients and another for another. The main thing is to get out into the open air.

DR. HARRY LANE, Portland, discussed "The Outdoor Treatment of Tuberculosis." He also was in favor of the patient leading a rough outdoor life. "We should be very careful when out camping, though, to have a tent that will admit the air, or it will be worse than if we were in the house." He also spoke of the value of having roof gardens where the patients could enjoy the open air and be comfortable.

DR. WOODS HUTCHINSON thought "it should be made a penal offense for physicians to give drugs in the treatment of tuberculosis. It is an established fact that the open-air treatment is the only one that is valuable."

Typhoid Fever.

DR. ALBERT E. MACKEY, Portland, in his paper "Modern Methods of Diagnosis," discussed the best methods of diagnosing typhoid fever.

DR. HOLT C. WILSON, Portland, in his discussion of "The General Treatment," did not consider cold baths and cold applications a valuable means for lowering the temperature. These statements were combated vigorously by a number of members.

Surgical Treatment of Goiter.

DR. ANDREW C. SMITH, Portland, discussed this subject and said that the death-rate had been diminished from 40 per cent. to less than 1 per cent. by the evolution of operative technic. He dwelt on the value of making transverse incisions lower in the neck for cosmetic purposes and advised the local use of general anesthesia as it eliminates all danger of injuring the voice.

Appendicitis.

A symposium on this subject was held and the usual amount of discussion indulged in. The topic was divided as follows:

"Medical Aspects," Dr. Woods Hutchinson, Portland.
"Diagnosis," Dr. Kenneth A. J. Mackenzie, Portland.
"Surgical Treatment," Dr. Andrew C. Smith, Portland.
"Surgical Technic," Dr. George F. Wilson, Portland.
"Surgical Complications," Dr. Andrew J. Giesy, Portland.
"Prognosis," Dr. Jacob A. Fulton, Astoria.

Reorganization.

The draft of the constitution and by-laws presented last year was indorsed by the executive committee. This committee's work was to formulate rules and regulations by which county and district societies may be affiliated with the state medical society on the plan suggested by the American Medical Association.

The executive committee submitted its recommendations, with the following statement of the name and objects of the association:

The purpose of this association shall be to federate and bring into one compact organization the entire medical profession of the state of Oregon, and to unite with similar associations in other states to form the American Medical Association; with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine; so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

Component societies shall consist of those county and district medical societies which hold charters from this association.

Portland vs. Multnomah.

After a hot debate it was decided that new members would be admitted to the Portland Medical Society hereafter by a

majority vote. A committee was appointed to have charge of the admission of new members, and their vote will be considered final. The American Medical Association recognizes but one medical society in a county, and in Portland there are two. The old Portland Medical Society, now known as the Portland City and County Society, gained recognition at the last meeting. In order, then, for the members of the Multnomah Medical Society to become members of the American Medical Association it will be necessary for them to change their membership.

Election of Officers.

The election of officers resulted as follows: President, Dr. H. Waldo Coe, Portland; vice-presidents, Drs. F. N. Van Dyke, Grant's Pass, J. A. Geisendorffer, The Dalles, and James P. Tamiesie, Hillsboro; secretary, Dr. Alexander D. Mackenzie, Portland, and treasurer, Dr. Mae H. Cardwell, Portland.

Banquet.

The meeting closed with the annual banquet at the Hotel Portland.

Portland was selected as the place of meeting for 1903.

ORLEANS PARISH (LA.) MEDICAL SOCIETY.

Stated Meeting, held at New Orleans, La.

Yellow Fever and Mosquitoes.

DR. OLIVER L. POTHIER, New Orleans, who was a member of the recent United States Public Health and Marine-Hospital Commission on the Investigation of the Yellow Fever and Mosquitoes in Vera Cruz, gave a short account of his experiences. Yellow fever, he said, was endemic in Vera Cruz, and there was always plenty of material for investigation. Yellow fever that increased in the dry months, decreased in the wet period (April, May and June), began to increase in July and continued prevalent until the advent of cold weather (November and December). These facts were well explained by the theory of the mosquito in the propagation of the disease. During the dry season, mosquitoes (*Stegomyia fasciata*) were abundant, but during the wet season the nuisance abated. In July the insects began to swarm again.

The mortality of yellow fever in Vera Cruz was extremely high, due either to the virulent form of the disease, or, more likely, to lack of proper treatment in the hospitals. On admission the patient was given a dose of citrate of magnesia and an enema of permanganate of potash. After that he had practically no treatment. He was starved, but given an abundance of Vichy water. He might smoke or walk about the ward if he wished. The physicians of Vera Cruz were anxious to obtain means to prevent the disease and methods for accurate early diagnosis. They, therefore, warmly welcomed investigators. The government was willing and anxious to furnish all facilities. The patients were easily handled and submitted willingly to experiments.

Dr. Pothier preferred not to divulge any further information as to the commission's work than had already been given to the newspapers. He said, however, that the cause of yellow fever had been determined to their satisfaction. The *B. Sanerelli* was doomed. It stood in no etiologic relation to yellow fever. The work of Reed and Carroll as to the transmission of yellow fever by *Stegomyia fasciata* had been entirely corroborated. There still remained a great deal to be done, particularly in the way of confirmation and investigation and, more especially, even with regard to the question of quarantine.

The quantity of this variety of mosquito in Vera Cruz was enormous, due principally to the custom of storing drinking water in barrels all over the house. The barrels were literally alive with larvæ, some containing as many as 100 to 150 larvæ to the glassful. Malaria in Vera Cruz was prevalent in August and September and again in the spring. The hospitality and kindness of physicians had been very great; nothing had been left undone to accommodate the commission in every way.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns without allusion to inquirer.]

Gonorrheal Conjunctivitis.

Merck's Archives recommends the following silver salts in treatment of inflammatory conditions:

R. Largin 3i 4|
Aq. destil. 3vi 180|

M. and dispense in amber-colored bottle. Sig.: Bathe the eyes freely with this, lukewarm, five times daily.

Largin contains 11 per cent. of silver and is soluble in about ten parts of water. It is reported as non-irritating and not precipitated by sodium chlorid or albumin.

Ichthargin may be used in the following strength:

R. Ichthargin gr. xxx 2|
Aq. destil. 3viii 240|

M. and dispense in amber-colored bottle. Sig.: Bathe the eyes freely with this, lukewarm.

Ichthargin is a combination of silver and ichthyol, and contains about 30 per cent. of silver. It is soluble in water.

Eczema Due to Intestinal Intoxication.

Dr. Nelken, in *N. Y. Med. Jour.*, recommends the following in cases of intestinal auto-intoxication:

R. Hydrarg. chloridi mitis gr. i 106|
Salol gr. xx 130|
Guaiaecol carb. gr. xv 1|
Pulv. pepsini gr. xxx 2|

M. Ft. Chart. No. xii. Sig.: One powder to be taken three times a day. A restricted diet is recommended by the author; greasy food and sweets as well as fruits and pastry in any form should be forbidden. The following ointment is applied locally:

R. Aq. picis liq. 3i 4|
Ung. aq. rosæ 3i 30|
Ung. zinci oxidi 3ii 60|

M. Sig.: To be used locally night and morning; washing with plain water is forbidden, but twice a week water with which sufficient bran has been added to make it milky should be used, and the face kept clean with a cloth saturated with olive oil.

A Rubifacient Cataplasm.

The following is recommended by *Prov. Medical* as a local counter-irritant:

R. Barley pulverized 3iii 90|
Vinegar 3vii 28|
White of eggs No. iii.
Water, q. s.

Mix cold and make a kind of paste to be spread on cloth and dusted with seven teaspoonfuls of powdered pepper, and apply locally.

Impetigo Contagiosa.

Dr. M. F. Engman, in *Pediatrics*, recommends the following in the treatment of impetigo contagiosa:

R. Sulphuris precip.
Zinci oxidi
Potassii sulphid, aa 3i 4|

M. Sig.: Apply locally night and morning.

Bunions.

These painful enlargements, according to the *Phil. Med. Times*, are amenable to treatment by applying static sparks and galvanic applications with cocain. If simply painful, a fine static spark drawn through the shoe will suffice. In making the static application, a point in the center of the bunion will be found to be anesthetic. Concentrate the sparks at this point until the patient feels the current. This may be repeated once or twice daily. The anodal spark has been used as a rule, but it seems to be the rapid vibrations that are

beneficial, consequently either electrode may be applied with the rapid vibration.

Dysmenorrhea.

The following combination is recommended in painful menstruation in which there is more or less inflammation present:

R. Berberinæ phos.	gr. xii	75
Tinct. hydrastis	3ii	8
Syr. simp., q. s. ad.....	3ii	60

M. Sig.: One teaspoonful every three or four hours.

Where there is ovarian involvement accompanied by dysmenorrhea the following is recommended by *Merck's Archives*:

R. Ichthyol	3i	30
Glycerini	3iii	12
Aquæ, q. s. ad.....	3iv	120

M. Sig.: Douche the vagina with hot water, then apply pledgets of cotton soaked in this mixture as far up as they can be borne and repeat every other day.

Malaria.

The following combination is recommended by V. P. de Sande in *El Med. Titul.* as a substitute for quinin where there is idiosyncrasy against this preparation:

R. Tinct. iodi		
Pot. iodidi, aa	3i	4
Aq. destil.	3iii	90

M. Sig.: One teaspoonful to be taken in a little water at the beginning of the chill and a second dose one half-hour later.

This remedy is said to be of special benefit when administered during the attack when the plasmodium is in the process of multiplication by segmentation.

Chlorosis in the Nervous and Hysterical.

The following combinations are recommended by Yeo in the treatment of chlorosis in nervous individuals:

R. Ferri cit.	3i	4
Pot. bromidi	3iiss	10
Vini (malaga)	3viii	240

M. Sig.: One tablespoonful three times a day.

The following may be taken in the pill form as a substitute for the above:

R. Ferri valerianatis	gr. xx	130
Ext. rhei. q. s.		

M. Ft. pil. No. xx. Sig.: Two to ten to be taken daily.

Methyl Blue in Cancer.

The following formula has been recommended by Cucca and Ungaro, in *Centralblatt für Gyn.*, as a local application in the treatment of carcinoma of the uterus:

R. Methyl blue	3iiss	6
Alcoholis (90 per cent.)	3iii	12
Glycerini	3iii	12
Aq. destil.	3vii	210

M. Sig.: Apply locally to the cervix on tampons following curettement.

The authors state that a weaker solution of the foregoing combination can be used in the form of an irrigation for vaginal and intra-uterine irrigations. By this method of treatment hemorrhage has been checked for months and pain has been so relieved that morphin was not needed to give relief, and the progress of the disease was notably checked.

Chorea.

The following treatment of chorea, as recommended by Professor Comby of Paris, is summarized by *Med. News*:

Absolute rest in bed for at least fifteen days; relative isolation, no games, no intellectual work in order to establish cerebral repose; no wines or other alcoholics, no tea or coffee; only water or milk to drink, combined with a vegetable diet and in case of arsenic treatment absolute milk diet.

The medication is rather striking. He employs two drugs, arsenic or antipyrin; the arsenic is employed in the form of arsenous acid, which is given in frequent doses, very highly diluted, for eight to ten days. The dose of the drug ranges

from one-half a grain (.0030 gm.) to two and a half grains (.15 gm.) daily at the height of the treatment, notwithstanding which the author has only once observed toxic effects. The tolerance, he states, depends on the manner in which the drug is administered, and on the fact that the kidneys are actively stimulated by the ingestion of large amounts of water. If antipyrin is used, he gives as high as eight grains (.50 gm.) at a dose, repeated according to the age of the child.

Ozone in Pertussis.

According to Louis Delherm in an abstract in the *Monthly Encyc. of Pract. Med.*, ozone is a specific in whooping cough and exerts a strong antispasmodic action during the stage of whooping. Given in inhalations of ten minutes three or four times a day it causes marked diminution in the number of paroxysms and seems to prevent recurrence. It decreases cyanosis and seems to aid in the amelioration of a complicating pneumonia. The time between paroxysms is frequently lengthened and the cough is attenuated in intensity, violence and duration. The treatment should be kept up two weeks at least, and it is perfectly harmless.

Medicolegal.

MASSACHUSETTS ACTS AND RESOLVES OF 1902.

Autopsies in Insane Hospitals.—Chapter 417 of the Massachusetts Acts of 1902, entitled "An act relative to autopsies in state insane hospitals and asylums," adds to Chapter 77 of the Revised Laws, entitled "of the promotion of anatomical science," a new section, numbered 5, which reads: Where the cause of death can not otherwise be determined the chief medical officer of the institutions named in section one shall have power to cause autopsies to be made on bodies unclaimed by relatives or friends, before surrendering the same to such persons and in such manner as are specified in Sections 1 and 2 of this act.

Investigations as to Vaccine Lymph.—Chapter 107 of the Resolves of the General Court (legislature) of Massachusetts of 1902 authorizes and requests the State Board of Health to report to the general court as soon as possible a plan for the production and distribution of pure vaccine lymph for free use in the commonwealth; also to report as to the quality of the vaccine lymph in use in the commonwealth during the past winter and at the present time, and as to the quality of the vaccine lymph produced or sold by private persons or corporations in the commonwealth, and the methods and conditions by and under which it is produced. Chapter 121 authorizes and directs the State Board of Agriculture to investigate as to the feasibility and probable cost of producing vaccine lymph at the Massachusetts Agricultural College, for free distribution within the commonwealth, and to report the result of such investigation, together with such recommendations as the board may consider advisable, to the general court on or before January 15, 1903.

Relative to Vaccination.—Chapter 190 of the Massachusetts Acts of 1902 amends Section 137 of Chapter 75 of the Revised Laws by striking out, after the word "whoever," the words "being over twenty-one years of age and not under guardianship," so that it now reads: "The board of health of a city or town if, in its opinion, it is necessary for the public health or safety, shall require and enforce the vaccination and re-vaccination of all the inhabitants thereof and shall provide them with the means of free vaccination. Whoever refuses or neglects to comply with such requirement shall forfeit five dollars." Section 139 of the chapter relative to exemptions is entirely stricken out and the following inserted in place thereof: Any person over twenty-one years of age who presents a certificate signed by the register of a probate court that he is under guardianship shall not be subject to the provisions of Section 137; and any child who presents a certificate signed by a registered physician designated by the parent or guardian, that the physician has at the time of giving the certificate personally examined the child and that he is of the opinion that the physical condition of the child is such that his

health will be endangered by vaccination shall not, while such condition continues, be subject to the provisions of Section 6 of Chapter 44 of the Revised Laws or of the three preceding sections of this chapter; and the parent or guardian of such child shall not be liable to the penalties by Section 136 of this chapter.

Expenses in Smallpox and Other Cases.—Chapter 213 of the Massachusetts Acts of 1902 provides that reasonable expenses incurred by the board of health of a city or town in making the provision required by law for persons infected with the smallpox or other disease dangerous to the public health shall be paid by such person or his parents, if he or they be able to pay, otherwise by the city or town in which he has a legal settlement, on the approval of the bill by the board of health of such city or town; and such settlements shall be determined by the overseers of the poor. If the person has no settlement such expense shall be paid by the commonwealth, on approval of bills therefor by the State Board of Charity. In all cases of persons having settlements a written notice sent within the time required in case of aid given to paupers, shall be sent by the board of health or by the officer or board having the powers of a board of health in the city or town where the person is sick, to the board of health, or to the officer or board having the powers of a board of health in the city or town in which such person has a settlement, who shall forthwith transmit a copy thereof to the overseers of the poor of the place of settlement. In case the person has no settlement such notice shall be given to the State Board of Health, in accordance with the provisions of Section 52 of Chapter 75 of the Revised Laws. No person for whose care and maintenance a city or town or the commonwealth has incurred expense in consequence of smallpox, scarlet fever, diphtheria or other disease dangerous to the public health shall be deemed a pauper by reason of such expenditure.

New Sanatorium for Consumptives.—Chapter 126 of the Resolves of the General Court (legislature) of Massachusetts of 1902 directs the State Board of Charity to investigate the following matters and to report thereon to the general court on or before January 15, 1903: 1. Is it necessary or expedient for the commonwealth to make additional provision for the care and treatment of consumptives? If so, should such provision be made by establishing one large new sanatorium or by establishing several smaller institutions, and, if several, should these be located in different parts of the commonwealth so as to provide for patients at sanatoriums comparatively near their places of residence? 2. Should the patients be furnished board and treatment without charge, or should a moderate charge, not exceeding the actual cost, be made for board? And, if the patients should be unable to pay for their board, should the cities and towns in which they have a legal settlement be required to pay therefor? 3. Where, in the opinion of the board, should a new sanatorium or new sanatoriums be established? 4. What would the board recommend as to the material, plan, manner of construction and details of such sanatorium or sanatoriums? If the board should conclude that it is advisable for the commonwealth to establish a sanatorium or sanatoriums the board is authorized to prepare a general plan of a building or buildings therefor, together with an estimate of the cost of constructing them, and such plan and estimate shall form part of the report to be made by the board to the general court. In carrying out the provisions of this resolve the board may expend, with the approval of the governor and council, a sum not exceeding two thousand dollars.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record (N. Y.), October 25.

- 1 *The Urine from Each Kidney. Ferd. C. Valentine.
- 2 *The Most Frequent Form of Vaginal Hernia; Its Etiology and Treatment. Samuel W. Bandler.
- 3 *On the Eradication of Yellow Fever in Havana. Edmond Souchon.

- 4 *Some Early Stages of the Disease of Inebriety. T. D. Crothers.
4½ The X-Ray. Milton Franklin.
5 *Infectious Broncho-Pneumonia; A Report of Six Recent Cases.
D. W. Wynkoop.

New York Medical Journal, October 25.

- 6 *Diseases of the Gall-Bladder. John B. Deaver.
- 7 *Experimental Gastritis; Early Pathological Changes. Fenton
B. Turk.
- 8 *The Treatment of the Insane in Private Practice. F. Savary
Pearce.
- 9 *The Results of Examinations of the Blood for the Widal Reaction
Performed at the Diagnosis Laboratory of the Health
Department of New York City During 1901. John S.
Billings, Jr.
- 10 The Prevention of Smallpox. M. L. Hughes.

Boston Medical and Surgical Journal, October 23.

- 11 *The Teaching of Surgery. (To be continued.) Herbert L. Burrell.
12 Deciduoma Malignum; Report of a Case. J. C. Hubbard.

American Medicine (Philadelphia), October 25.

- 13 Report of Two Cases of Gastrectomy, with Remarks. Albert
14 Vander Veer. E. H. Bradford.
15 " " f the Urine Constituents as an Aid to
16 " " Solimann.
17 " " of Hip-Joint Disease. James K. Young.
18 Report of a Case of Blastomycosis of the Skin. Isadore Dyer.
19 " " tion to Mental and Nervous Diseases.

- 19 to the Hospital. Walter Lathrop.
20 and Sources to Be Considered in the
Adoption of a Municipal Water-Supply. William G. Bissell.

Medical News (N. Y.), October 25.

- 21 *Note on the Newly Recognized Sugar-Controlling Function of
the Suprarenal Glands. C. A. Hertel.
- 22 *Remarks on Intrathoracic Pressure, with the Illustration of
the Author's Method of Lung Immobilization. Charles
Denison.
- 23 *Strictures of the Male Urethra. Robert H. Greene.
- 24 Comparative Toxicity of Ammonium Compounds, a Study in
Autointoxication. B. K. Rachford and W. H. Crane.
- 25 Acute and Chronic Tuberculous Phthisis, with Cases. J. Car-
deen Cooper.

Philadelphia Medical Journal, October 25.

- 26 *A Further Report upon the Treatment of the Tic Douloureux
by Division of the Sensory Root of the Gasserian Ganglion.
Charles H. Frazier and William A. Spiller.
27 *Tic Douloureux. Max Joseph.
28 A of Both Tabes and Multiple
29 *Tic Douloureux. M. Howard Fussell.
30 A Results of One Year's Treat-

etics. Herbert O. Collins.

Cincinnati Lancet-Clinic, October 25.

- 32 Lessons from the Earlier Medical History of Cincinnati.
Henry W. Bettmann.
- 33 Surgery of Prostate, Pancreas and Diaphragm. (Continued.)
B. Merrill Ricketts.
- 34 *Preliminary Report on a Method of Treatment for the Relief
of Hay Fever. Sylvester J. Goodman.
- 35 A Typical Case of Locomotor Ataxia, Tabes Dorsalis, or Pos-
terior Spinal Sclerosis. Mark D. Stevenson.

Northwestern Lancet (Minneapolis), October 15.

- 36 Rectal Prolapse. C. H. Mayo.
37 The Study of Internal Medicine. J. W. Bell.
38 *Septicemia and the Curette. H. Plympton.

Journal of the Michigan State Medical Society (Detroit),
October.

- 39 The Michigan State Medical Society—Its First Eighty-three
Years—Present Wants, and Suggestions for Their Supply.
Leartus Connor.
- 40 The Value of the Examination of the Blood to the General
Practitioner. W. K. West.
- 41 *Bacterial Toxins. Victor C. Vaughan.
- 42 Floating and Movable Kidneys. Richard R. Smith.
- 43 Calculus in the Kidney and Ureter. Theodore A. McGraw.
- 44 New Growths of the Kidney. Aldred S. Warthin.
- 45 Acute Kidney Infections. Theodore A. Felch.
- 46 Surgery of the Kidney in Tubercular Conditions. W. H.
Haughev.

Chicago Medical Recorder, October 15.

- 47 *The Typhoid Fever Situation in Chicago. Arthur R. Reynolds.
- 48 *The Etiology of Typhoid Fever. W. K. Jaques.
- 49 *The Typhoid Bacillus in the Blood in Typhoid Fever, with a Preliminary Report of a Study of Fifty-six Cases. Ellis K. Kerr and F. G. Harris.
- 50 *The Occurrence of Typhoid Bacilli in the Urine During Typhoid Fever. Adolph Gehrmann.
- 51 The Widal Reaction in Infancy and Early Childhood. Frank S. Churchill.
- 52 Typhoid Fever in Infancy and Childhood. I. A. Abt.
- 53 *The Dietetic Management of Typhoid Fever. F. X. Walls.
- 54 Migraine in Masquerade. Archibald Church.

- 55 The Abuse of Vivisection. G. G. Taylor.
 56 A New Self-Illuminating Ophthalmoscope. G. F. Suker.
 Interstate Medical Journal (St. Louis), October.
- 57 *On Epistaxis and Its Treatment. Adalbert Heindl.
 58 *The X-Ray as a Therapeutic Agent—Classified Report of Forty-three Cases. John H. Duncan.
 59 *Pleurisy as Associated with Tuberculosis. John Hunter.
 60 A Case of Simulated Motor Aphasia. Sidney I. Schwab.
 61 Cases of Chronic Aphthous Stomatitis. Henry W. Bettmann.
 New Yorker Medicinische Monatschrift, September.
- 62 Ueber Bedeutung, Pathogenese und Therapie der Versio-flexionen des Uterus. (Significance, Pathogenesis and Therapy of Uterine Versio-flexions.) L. A. Ewald.
 63 Das Recht des Aerztes und der Mutter über Leben und Tod des ungeborenen Kindes. (The Law of the Physician and the Mother as to the Life and Death of the Unborn Child.) R. Kossmann.
 Annals of Gynecology and Pediatrics (Boston), October.
- 64 *The Causes and Treatment of Sterility in Women. Edward J. III.
 65 Lazarus Riverius, 1589-1655. (Concluded.) Ira J. Prouty.
 66 A Plea for the Conservation of the Uterus in Pelvic Inflammation. O. Beverly Campbell.
 67 The Importance of the Early Treatment of Catarrhal Conditions of the Upper Air Tract in Children. Carolus M. Cobb.
 Canadian Practitioner and Review (Toronto), October.
- 68 *Presidential Address, Canadian Medical Association. Francis J. Shepherd.
 69 *Chauvinism in Medicine. William Osler.
 70 *The Contribution of Pathology to Surgery. John Stewart.
 Medical Examiner and Practitioner (N. Y.), October.
- 71 Diagnosis and Prognosis of Appendicitis. Robert T. Morris.
 72 *Appendicitis as Affecting Medical Selection. Charles L. Greene.
 73 *Race and Mortality. Frederick L. Hoffman.
 74 Diagnosis and Prognosis in Nervous Diseases. William B. Fritchard.
 75 The Shape of the Chest in Some Thoracic Conditions, and Especially in Tuberculosis. W. A. Evans and M. G. McHugh.
 76 Diagnosis and Prognosis of Diseases of the Stomach. Freeman F. Ward.
 77 Overweights (Male). Frank S. Grant.
 78 Questions About Which the Medical Department and the Field Sometimes Differ. R. L. Lounsberry.
 79 Chronic Catarrhal Otitis. Thomas J. Harris.
 80 Cough in Pulmonary Phthisis and Its Treatment. J. Leffingwell Hatch.
 Woman's Medical Journal (Toledo, Ohio), October.
- 81 Cancer Treated by X-Ray. Ida M. Wilson.
 82 Medical Inspection of Schools. Martha Anderson.
 83 A Résumé of the Work of the Physician's League During Its First Decade. Electa B. Whipple.
 Proceedings of the Philadelphia County Medical Society (Philadelphia), October.
- 84 The Value of Diphtheria Antitoxin. M. Howard Fussell.
 85 *Leucocytosis in Lead Workers. L. Napoleon Boston.
 86 *Hemorrhage in Typhoid Fever. Roland G. Curtin.
 87 *The Significance of Abdominal Pain in Typhoid Fever. Herman B. Allyn.
 88 *The Diet in Typhoid Fever. William E. Robertson.
 89 *Surgical Remarks on Typhoid Perforation. Robert G. Le Conte.
 90 Intussusception in a Boy of Fifteen Years. Mordecai Price.
 91 A Case of Hydromnios. Mordecai Price.
 Medical and Surgical Monitor (Indianapolis), October 15.
- 92 *The Value of Urinalysis to Perfect Diagnosis. J. W. Crismond.
 93 The Press and the Physician. Wm. C. Ball.
 94 *Filariasis—A Case in Indiana. M. A. Austin.
 95 *The Treatment of Uterine Hemorrhage with Adrenalin. T. B. Campbell.
 96 Dilatation of the Cervix as a Cure for Dysmenorrhea. John A. Gibbons.
 Ophthalmic Record (Chicago), September.
- 97 *Subconjunctival Inflammations. H. Gradle.
 98 A Report of Some Interesting Ophthalmic Cases. George F. Suker.
 99 Cases of Lenticular Opacity—Cataract Cured or Relieved by Treatment. H. V. Würdemann.
 100 On the Confusion in Methods of Numbering and Using Prisms. Lucien Howe.
 101 Corneal Tattooing. J. L. Borsch.
 102 Notes from Abroad. C. F. Clarke.
 103 Several Cases of Unusual Eye Diseases. J. Herbert Claiborne.
 Proceedings of the Pathological Society of Philadelphia, July.
- 104 Report of a Case of Splenic Pseudoleukemia. Thomas G. Ashton.
 105 Indications That Our Methods of Fumigation Are Faulty. G. E. Pfahler.
 106 A Case of Double Hydronephrosis. L. W. Steinhach and David Riesman.
 Kansas City Medical Index-Lancet, October.
- 107 *Hyperchlorhydria. T. H. Stucky.
 108 *Studies of the Etiology of Inebriety. T. D. Crothers.
 109 Report of a Case of Extirpation of the Stomach. J. D. Griffith.
 110 The Future Physician an Optimist. (Continued.) William F. Barclay.
- 111 Pott's Disease of the Spine—Report of a Case—Operations—Recovery. John Punton.
 112 A Double Amputation and Results. N. A. Drake.
 Merck's Archives (N. Y.), October.
- 113 Some Methods and Combinations Which Have Proved Particularly Valuable in My Personal Experience. William J. Robinson.
 114 Chemical Means for the Prevention of Bed-Sores. J. Dabney Palmer.
 Peoria Medical Journal, October.
- 115 Choice of Time to Operate. O. B. Will.
 116 Obstruction of the Bowels—Report of Four Cases. C. U. Collins.
 117 Clinical Report (Rectal Cancer). E. M. Sutton.
 Memphis Medical Monthly, October.
- 118 Some Remote Effects of Heart Lesions, with Special Reference to the Uterus. B. G. Henning.
 119 Pleurisy. J. T. Barbee.
 120 Hereditary Double Uvula. Richmond McKinney.
 121 Typhoid Fever; Drug Addiction; Jottings. W. S. Robinson.
 122 Abnormalities of the Uterus and Vagina. Joseph E. Johnson.
 123 A Claim for Priority in the Suggestion of Serum Therapy. E. H. Randle.
 124 Injuries to Internal Organs. J. O. Rush.
 125 Diagnosis of Disorders of the Central Nervous System. B. F. Turner.
 126 Gunshot Wounds of Stomach and Bowels. J. S. Rawlins.
 127 Pernicious Malarial Fever. A. E. Cox.
 128 Experiments with a Modified Form of Quinin. A. B. Cook.
 129 Operation for Varicocele with Unusual Termination. W. J. Robinson.
 Medical Bulletin (Philadelphia), October.
- 130 Hereditary Syphilis. John V. Shoemaker.
 131 The Treatment of Chronic Nephritis. George W. Pfomm.
 132 Observations on Three Hundred and Sixty-two Cases Treated with Aspirin. F. Wöhr.
 New England Medical Monthly (Danbury, Conn.), October.
- 133 Autobiography of the Late J. Milner Fothergill, M.D., London, Eng. (Continued.)
 134 A Contribution to the Therapeutics of Peptomangan, "Gude." Ludwig Pohl.
 135 Classification of Gynecological Cases as to Whether Medical or Surgical. Harris F. Brownlee.
 136 The Use of the Essence of Carolin in Alcoholic Bronchitis, and in Chronic Alcoholic Gastritis. George T. Palmer.
 137 Joseph Eastman, M.D., LL.D. Samuel E. Earp.
 138 Anusol in the Treatment of Hemorrhoids. John Mohr.
 139 Treatment of Lithemia. Frank M. Floyd.
 140 Clinical Notes on the Use of Urotropin in Pyuria. Frederick Fenton.
 141 Surgical Clinic at Harlem Hospital, New York. Thomas H. Manley.
 St. Louis Medical Review, October 25.
- 142 Diagnostic Points of Difference between Spermatorrhea and Seminal Pollutions. F. R. Sturgis.

1. The Urine from Each Kidney.—Valentine finds that Harris and Downes' methods are most applicable to the female bladder, but he thinks that Kelly and Pawlik's methods are easier, safer, and more effective for the purpose, though he admits that he lacks experience. The purpose of his present paper is to recommend Cathelin's divisor which is based on pushing into the bladder a soft rubber membrane which attaches itself to the walls and is grasped by the bladder, thus dividing the viscus into two halves as described in THE JOURNAL of July 19, 1902, p. 173. He reproduces the illustrations and gives details of technic of its management. He has employed it in a number of cases, and its applicability to the general practitioner is, he thinks, shown by the fact that he has found no difficulty in its use after seeing it demonstrated five times.

2. Vaginal Hernia.—Bandler describes the anatomical conditions producing vaginal hernia and describes the various conditions which fall under this head. Out of the broad general class of prolapsus vaginae, he says we must remove the following forms of vaginal hernia: "1. The most frequent, involving the lower half of the anterior vaginal wall, the so-called prolapsus vaginae anterioris, or, better and truly speaking in most cases, cystocele. 2. Prolapse of the upper third of the anterior vaginal wall through descent of the intestines (rare). It is only possible when the union between cervix and bladder has been disturbed. This condition constitutes an enterocele vaginae anterioris. 3. Prolapse of the upper portion of the posterior vaginal wall through a descent of the intestines, or enterocele vaginae posterioris. Here the uterus and the lower half of the vagina are not affected as regards their position. The upper part of the posterior vaginal wall, how-

ever, is influenced by the intestines in the sac of Douglas. 4. A so-called prolapse or dilatation of the lower half of the posterior vaginal wall containing a diverticle of the rectum—a rectocele." The various forms are usually combined. The lateral walls are rarely affected; the most frequently-noted form is cystocele, with descensus uteri. Next is cystocele plus rectocele, the latter due to laceration of the perineum, and least frequent, supposedly, is cystocele alone, though he finds it more frequent than generally supposed. Prolapse of the uterus with invagination of the vagina usually occurs only after the climacteric as the result of senile atrophy of the tissues. Cystocele may recur even with shortening of the round ligament or ventral fixation, and he says that two factors may be stated with certainty: 1. That the cure of retroflexion is not necessary for the cure of cystocele. 2. That the treatment of the posterior wall is not necessary to the cure of the lesion in the anterior wall. He remarks on Theilhaber's surgical treatment by anterior colporrhaphy, extending the excision laterally into healthy tissue, and bringing the upper ends of the levator ani muscle close together, narrowing the vagina and removing the thin urethrovaginal septum, and so closing the space on the under surface of the bladder through which this organ formerly descended. These were the chief reasons of his success. He also, in conclusion, describes elaborately the Dührssen method of ventral fixation as a valuable procedure and of considerable importance.

3. **Yellow Fever.**—Souchon claims that the eradication of yellow fever in Havana is not entirely due to the destruction of mosquitoes, but also to the rigid quarantine instituted by the medical authorities. He holds that yellow fever in a locality exhausts itself in two to four years, provided fresh cases, especially virulent ones, are not brought in from the outside. While he believes in the transmission of yellow fever by mosquitoes as demonstrated by Reed and Carroll, he also thinks there is some other means of transmission, and therefore argues against the mosquito crusade being alone effective. He calls attention to the fact that the same method was much less effectively carried out in other Cuban ports where yellow fever also ceased to exist.

4. **Inebriety.**—Crothers, in his study of the early stages of inebriety, makes prominent the following points: "1. The study of inebriety reveals a well-marked disease, passing through various stages, traceable by many and complex signs and symptoms. 2. The incipient stage seen before spirits are used is marked by dietetic delusions and other symptoms of nerve and brain irritability, all of which seem to depend on heredity or some obscure injury to the nerve and brain centers. 3. A group of symptoms can be found in most cases that may be termed pathognomonic, and will be seen in the later stages fully developed. 4. These early symptoms appear after the first toxic use of alcohol, and in some cases go on to full development, or are held in abeyance by some unknown force. 5. Practically, the recognition and study of this stage opens up a field of prevention and cure that will attract great attention at an early day."

5. **Infectious Bronchopneumonia.**—Wynkoop reports six cases in children and adults which seem to have started by the first cases visiting a watering place, Atlantic City, the others becoming infected. He remarks that the disease is highly infectious in young children. In all the cases there was an absence of coryza at the onset, and only in adults was the severe pain in the back spoken of. The disease in most cases gained its foothold in the larynx, and no amount of carbolic steam inhalations or quinin affected it. Without question it is systemic, the broncho-pneumonia being its local manifestation. The treatment is the same as for ordinary broncho-pneumonia. The prognosis is good, if the case is properly cared for. There is no mental disturbance following as an influenza, and though the temperature may continue high for a time in the convalescence, the general health improves. He suggests that it is inadvisable to send healthy children or adults to any health resort where infection may be obtained.

6. **Diseases of the Gall-Bladder.**—Deaver reviews the various disorders of the gall-bladder, including inflammatory affec-

tions such as cholecystitis, catarrhal, suppurative, phlegmonous, gangrenous, the obliterating forms, adhesions and the relation of these conditions to appendicitis. Cholelithiasis is noticed at length. He thinks the personal history should receive particular attention. He insists on operation as soon as the diagnosis is made. Cholecystotomy is the operation of choice and should be performed as rapidly as possible. There is no need of searching for stones or breaking up adhesions. That can be done later when the danger of infecting the ducts has disappeared. Acute phlegmonous cholecystitis and gangrene also require prompt operation. He disagrees with the view that cholecystectomy is advisable after numerous attacks of cholecystitis with adhesion, etc., and where the gall-bladder is shrunken, contorted or atrophied. He is satisfied as a rule with breaking up of adhesions and leaving the gall-bladder *in situ*. Hydrops usually requires aspiration and cholecystectomy. As regards prophylaxis, he calls attention to the diet, clothing, exercise, fresh air and restriction of the amount of alcohol used. The water cures are beneficial by the regular living and warm baths there used. Surgical operation is the only rational cure for gallstone disease.

7. **Experimental Gastritis.**—Turck has experimented with mustard in dogs to produce experimental gastritis and gives his results. He finds the early appearance of exudate within one or two hours after the introduction of the mustard emulsion, forming later a homogeneous mass of cell debris. The surface epithelium is not affected as much as the deeper mucosa, and the early appearance of necrosed acid or parietal cells, which become granular and lose their nucleus, is noted. Karyokinetic figures appeared within six hours, and cysts of the glands in the twenty-four-hour specimen, with accumulation of leucocytes and degenerated epithelial cells. The exudate becomes infected after a little while, though at first it is not a good soil. He remarks that chemotactic and other effects of mustard due to its peculiar toxic properties open up an interesting point as to what antibodies may be found. He is now experimenting in this direction.

8. **Private Treatment of the Insane.**—Pearce considers that certain forms of insanity are better treated at home than in asylums, though the asylum is best for the majority of cases. His conclusions are: "For all of us the lesson of acute insanities should be modified and retaught, and the earliest possible treatment instituted; looking toward the cure of the acutely insane in private, long before there is any occasion to think of asylum treatment, valuable as that is in chronic insanity, and for the homicidal maniacs and melancholics. Acute insanities of hybrid types, i. e., those that savor of two or more types, are the most hopeful in prognosis, and are therefore the ones to be kept out of asylums to the last moment. Especially where hysteria enters as an element in the case, the patient should be kept out of an asylum. The physician's duty is to overcome the terror felt by lay folk for the insane, and to engender that hopefulness of treatment of such cases in private which is so common in general medical affections."

9. **Widal Reaction.**—The experience in the diagnosis laboratory of the New York Health Department in regard to this reaction during 1891, is reported on by Billings, who finds that cases that showed the positive reaction were all clinically typhoid fever. Of 164 cases where reaction was doubtful, 39 proved not to be typhoid and 33 were typhoid. In 92 cases no subsequent information could be obtained. A number of cases, 78, failed to show a reaction, but afterward proved to be typhoid fever. He remarks on the varied and diverse conditions that may so simulate typhoid as to lead to a Widal test, among them intestinal ulceration, tumor in the lumbar region, hepatic cirrhosis, acute hepatitis, and abscess of the suprarenal capsule. In only one instance was the association of typhoid and malaria noted. A number of specimens were examined also with the paratyphoid test and the results were uniformly negative. He thinks likely that the blood in cases of paratyphoid infection reacts only with the special organism.

11. **The Teaching of Surgery.**—This article by Burrell is the result of a series of inquiries sent out by him to various

institutions throughout the world. He discusses the advantages of lectures, recitations and their use in different institutions. He also enumerates the institutions where surgical anatomy, physiology and pathology are taught as well as surgical technic and diagnosis.

14. Arthritis Deformans.—Bradford discusses the theories of arthritis deformans and concludes that we really do not understand the nature of the disease. It is much more common in old age, and its prevalence is greater than is supposed. He notes a curious fact in the Long Island Almshouse that of a number of old men affected none had nodes in the hands, while in the woman's department, the hands were usually specially affected. Why this should be so is not yet explained. Improvement seemed to follow proper treatment; whatever improves the patient's general condition improves the local symptom. Motion of the joint with protection from sprain improves its condition; improvement will result if contracted joints are straightened and placed in a condition in which moderate motion is possible. Measures to improve the circulation, such as heat and cold and static electricity, are useful. The arrest of the disease by a natural process should be regarded as a stimulus to investigation. He concludes by saying that arthritis deformans may be regarded as an affection of the organs of locomotion characterized by fibrous degeneration of synovial membrane ligaments, bones, cartilage and periosteum, causing an impairment of elasticity, and alteration in shape, and stiffness. These are followed by osseous degeneration, bony ankylosis, and irregular bony deposit. We need more complete pathologic reports of the condition of all the organs in this condition, a thorough investigation of the changes of tissue in the milder stages and carefully recorded clinical facts in regard to the arrest of the affection and the apparent self-limitation, careful chemical investigation of the tissues and blood and excretions. All these are needed before it can be placed on a satisfactory basis.

15. Concentration of Urine.—Sollmann's article is too elaborate for abstracting. He gives special attention to cryoscopic changes.

16. Hip-Joint Disease.—The various methods of treatment of hip-joint disease are reviewed by Young. In some cases, when the ankylosis is of the false variety, multiple myotomies are frequently all that is required, especially when forcible straightening is employed as an adjuvant. Forcible straightening by itself is not sufficient, and may cause great injury if tenotomies have not been performed previously. Osteotomy gives very satisfactory results in true and osseous ankylosis, and its necessity can frequently be determined by skiagrams. The Gant or subtrochanteric osteotomy is better than the Barton or intertrochanteric operation. Motion is not to be expected as the limb is still ankylosed and merely put in a better position. Among the operative measures he mentions aspiration, which has not been found satisfactory, though it may be valuable in small joints. In performing simple incision the surgeon should always have permission to proceed to a more radical operation if necessary. The erosion of the joint after the method of Willard, is favored in all instances when the disease is not extensive, particularly during childhood. This is accomplished by the curettage of every part of the joint surfaces, the debris being carried away by the flow of sterile water through a canulated curette, after which the iodoform emulsion may be thrown into the cavity and drainage provided. All the sinuses should be freely opened as well as all the abscess cavities, and the diseased tissue removed. It is the preferable operation in children, even when the disease is quite extensive, as it does away with the short leg that follows incision of the joint. In extensive disease in adults, incision is advisable, but should only be performed in carefully selected cases. He does not believe in amputation for this condition excepting in rare instances.

21. The Sugar-Controlling Function of the Suprarenal Glands.—In this article Herter discusses the hypothesis of the suprarenal glands serving as a means by which the controlling influence through the pancreatic function of the sugar secretion is exercised. He has put this hypothesis to the experi-

mental test and obtained results which he thinks fully confirm the controlling influence of the suprarenals. In this article he simply intends to indicate the character of the evidence on which the newly-recognized function of the suprarenals is based: 1. Massage of one or both suprarenal glands practiced on dogs is followed by glycosuria. The application of pressure to the gland probably squeezes into the circulation an excess of the blood-pressure-raising constituent of its internal secretion. This is probably responsible for the glycosuria observed, which is largely controlled by the action of this constituent of the cells of the pancreas. Removal of the suprarenal gland or ligatures of its vessels is followed by rapid decline in the sugar of the blood. This does not imply that the removal completely destroys the power of the organism to make sugar, as this is shown to be not the case by experiments. He thinks that the low content of the blood in sugar after exclusion of the suprarenals may contribute to the early death that follows the operation. Sugar is probably required by all the active cells of the organism, and when the supply falls below a certain level it is conceivable that the nerve cells cease to functionate. He also extirpated the pancreas totally four days after ligation of the suprarenal vessels on the one side and ablation of the suprarenal gland on the other, and he finds the results in harmony with the preconception that the removal of both pancreas and suprarenals would render extirpation of the pancreas inoperative in the production of glycosuria. The fact that codein diminishes the sugar secretion in some patients suggested an inquiry as to its method of action, and he finds that it seems to be capable of lowering the blood-sugar content of normal dogs. Whether it acts by uniting with a product of the suprarenal glands is an open question.

22. Intrathoracic Pressure.—Denison's article is largely an answer to Bridge's views that shallow breathing and the passive policy to some extent is better for consumptives, and that they do not so much need altitude as a curative measure. In conclusion he also describes his method of strapping the chest to produce immobility of its lung, which he thinks is possible by this method and is to some extent more advantageous than the Murphy injections.

23. Urethral Strictures.—The following are the conclusions of Greene's article: "1. Careful treatment of chronic urethritis will prevent the formation of stricture. 2. True stricture is of slow growth and can generally be best treated by a prolonged passage of sounds and the proper treatment of any complication co-existent with it. 3. Cutting operations are almost never required in strictures which have not been previously incised. Strictures once incised, unless kept open, are liable to require further incision. 4. An incision being necessary, it is better to do an external urethrotomy combined with an internal urethrotomy if required."

26. Division of the Sensory Root of the Gasserian Ganglion.—Frazier advocates this method of severing the sensory root of the gasserian ganglion in obstinate cases of tic douloureux in preference to extirpation of the ganglion. Its advantages are in the avoidance of hemorrhage from the more severe operation of extraction of the ganglion with the severance of its dural adhesions, etc., and the avoidance of injury to the adjacent structures such as the motor root of the ganglion, the sixth nerve and the cavernous sinus, and reduction in the mortality rate from the operation. Spiller adds remarks on the advantages of the operation, and advises that the sensory root should be divided close to the pons so as to leave no part of the root containing sheaths of Schwann in connection with the pons. This will avoid any regeneration of the sensory fibers that might again bring on trouble.

27. Herpes Zoster.—Joseph finds that herpes zoster forms about 1 per cent. of all cases of skin diseases, and it occurs about equally in men and women. Its age prevalence is usually at between 15 and 30 years, increasing up to that period and decreasing afterward. Before school age it is rare. Its local frequency in the body depends more on the abundance of nerve supply, but there is one exception in his observations and those of Greenough, namely, an exceptionally large number of cases in the trigeminal region. This possibly may be due to the

fact that the region supplied is more open to injury and disease. Both sides of the body are apparently affected-alike or with equal frequency, bilateral herpes zoster being rare. Zimmerleni says that herpes zoster occurs among physicians and nurses in epidemic form, and that no other occupation seems to predispose to the condition. This point can only be verified by consulting industrial and hygienic statistics. Epidemics of herpes zoster occur in the spring and fall and the sporadic cases occur with almost equal regularity throughout the year.

29. Diphtheria Antitoxin.—Fussell reports cases which show the value of diphtheria antitoxin and offers the following rules, which he thinks if followed will reduce the mortality of diphtheria to nothing instead of the present 30 per cent. or thereabout, occurring in Philadelphia: "1. Always make a culture in throat cases; diphtheria can not be certainly diagnosed without it. 2. When called to see a case of sore throat which is doubtful in character, give antitoxin at once and make the diagnosis by culture afterward. 3. When a case of undoubted diphtheria is seen, administer 2000 units at once. If there is no improvement in six hours, administer 2000 units again. Every 12 hours thereafter administer 2000 units until improvement begins. 4. Always give a large dose; 2000 to 4000 units in my hands has proven sufficient, but in desperate cases much larger doses may be used, as proven by the Boston experience. I believe that, given a case of diphtheria in an early stage, it is only a matter of administration of enough antitoxin to effect its cure. If one waits, even in apparently mild cases, fatal pathological changes may occur in the organs which will make death or invalidism certain, even though antitoxin be administered later.

34. Hay Fever.—The method of treating hay fever reported by Goodman consists in first using an alkaline spray to the nose and throat and then the local application of cocain, following these with the spraying of adrenalin, in 1 to 5000. Finally he packs the nostrils with a cotton plug saturated with adrenalin, 1 to 1000, leaving the application in place for ten minutes. He reports cases of his success by this method. While he does not claim it as a positive cure, he thinks the results have been very satisfactory.

38.—This article has appeared elsewhere. See *THE JOURNAL* of October 25, [36, p. 1072.

41. Bacterial Toxins.—In this article Vaughan gives the results of a number of experiments made in his laboratory at Ann Arbor in regard to certain bacilli and their toxins. He describes his method of obtaining toxins, and reviews to some extent the experience of others in the same line of study. He finds that the colon toxin is a constituent part of the cell, and is formed by synthetical processes which build up cell tissues. It is highly resistant both to chemical agents and to heat, and is undoubtedly of complicated constitution, and contains two or more toxic groups, one of which may be split off by agents which have a hydrolytic action. The toxin thus split off from the cell by dilute acids may be deprived of its poisonous property by the long-continued application of heat, especially in the presence of free mineral acid. As regards the anthrax toxin he reviews the work of Conradi and reports that carried out under his direction by J. W. Vaughan, which lead to the following conclusions: 1. The anthrax germ produces an intracellular toxin, which contains two or more toxic groups, one of which is split off by means of dilute sulphuric acid at the temperature of 110. 2. The split toxin is deprived of its poisonous properties by continued heating in the presence of free mineral acid. 3. The toxin split off by dilute acid is probably basic in character and possibly belongs to a low order of proteid substances, since it does not respond to the biuret or Millon test, but does give the xanthoproteic action. It seems, however that this bacillus must undergo certain hydrolytic changes by means of which its toxin is set free. Whether this is a passive one due to normal disintegration of the dead cell or is caused by activity of certain cells in the animal body, is a subject for future investigation. Vaughan says it seems likely that the animal body cells in resisting the invasion of the bacterial cells split the latter up, and in so doing liberate the

poison which destroys the life of the animal. The diphtheria toxin which has been most studied is noticed at some length. He gives the general points of Ehrlich's theory and remarks that Gelston at work in his laboratory has shown in addition to the soluble diphtheria toxin, also an intracellular toxin, and that the commercial diphtheria antitoxin, while it protects animals against the extracellular poison, fails to afford protection against the intracellular toxin. This seems to explain the fact that has been observed that certain animals which are practically immune to diphtheria toxin are not immune to diphtheria infection. Whether or not the antitoxin for the cellular toxin can be produced in animals-artificially, remains to be determined. The relation between the cellular toxin and the soluble poison also opens up a question of interest and importance for future investigation.

47.—See abstract in *THE JOURNAL* of October 18, p. 1000.

48.—*Ibid.*

49.—*Ibid.*

50.—*Ibid.*

52.—*Ibid.*

53.—*Ibid.*, p. 1001.

57. Epistaxis.—The various causes of nose-bleed, including neoplasm, malignant and benign and chronic rhinitis, excoriations, ulcer, etc., are noted and the methods of meeting the cases. The author advises Belloc's method of packing the posterior nares if this is required. If the anterior nares are to be tamponed it can be done usually with gauze in strips one and one-quarter inches wide and six to ten long, crowded back by forceps. No tampon should remain in place longer than three days. He suggests, of course, styptic solutions and adrenalin, though they may be of little service in dyscrasias, where we may use morphin, gelatin injections, saline transfusions, etc. After successfully controlling hemorrhage it will be necessary to examine for constitutional trouble; one should never let the patient alone until the certainty of bleeding is checked. It is advisable to caution the patient as to his mode of living, warning him about blowing the nose too hard, and especially cautioning as to snuffing up water into the nose.

58. The X-Rays.—Duncan has employed the x-ray in a large number of conditions with great success, though in osteosarcoma he has not found it so beneficial. He offers the following conclusions: "1. That while it is not a panacea, and will not relieve all cases of any one kind of lesions, its value as a therapeutic agent is unmistakable and most valuable when properly used. 2. That the sooner the disease is treated after it makes its appearance the more success we may expect. 3. That those scientifically using the treatment should refuse to take patients even when they have every reason to believe they would be benefited, unless the patient can agree to be with the operator at least three or four weeks, for while improvement often is manifested after a few treatments, sometimes it does not show itself for several weeks. 4. That it is often palliative in inoperable cases and rids the patient, if only temporarily, of great pain. 5. That after an operation for a malignant growth the healing of the wound by the x-ray is beneficial, in that diseased tissue which probably may have escaped the knife is destroyed by the ray during the healing process. 6. That the operator must especially understand his tubes and not indiscriminately use tubes of great and slight resistance. 7. That sufficient time has not elapsed for us to say that the lesions will or will not return; but suppose they should return in six or twelve months or a longer time, is it not easy for the patient to undergo the same treatment, and probably get the same relief? Thus far, however, I may say that relapses have been very rare with those who have used the treatment longer than I have. 8. That in superficial epithelioma, lupus of both forms, especially vulgaris, cancer of the breast, and sarcomas of some forms (not osteo), the ray is very beneficial, and in the great majority of cases curative. 9. That in the treatment of cancers of internal organs judgment must be suspended until further experience and perfection of the apparatus."

59. **Pleurisy.**—Hunter holds that at least 50 per cent. of the cases of pleurisy are tuberculous, judging from his study of the literature and his personal experience. He does not consider it, however, necessarily gloomy in prognosis as a pulmonary affection is not inevitably the result. He advises climatic treatment in tuberculous pleuritis, and thorough anti-tubercular régime. Cases in which it is a question of removal of an effusion are sometimes puzzling, but the effusion is frequently more or less rapidly absorbed. When the dyspnea is not urgent and the cardiac impulse in normal position, it is prudent to wait, although the quantity of fluid may be quite extensive. The restriction of fluids and the use of saline cathartics, diuretics, massage and "flying" blisters may be tried. He quotes the following indications for paracentesis from Fowler: "1. When there are signs of positive intrathoracic pressure; 2, when the following symptoms which usually accompany the above condition are present—a small, irregular pulse and urgent dyspnea, palpitation on slight exertion, lividity, or evidence of engorgement and edema of the opposite lung. These symptoms may, however, be absent in cases accompanied by positive intrathoracic pressure so long as the patient is lying perfectly still. 3. When the fluid has been ascertained to be purulent its removal is necessary in all acute cases. It may be necessary to remove the fluid more than once, but only a few repetitions can be borne by the patient without impairing his strength. In aspirating, strict antiseptic precautions must be observed. The needle or the canula—if a trocar be used—should be about one-tenth of an inch in diameter and about three inches long." The usually selected positions are between the sixth and seventh ribs in the mid-axillary line or between the ninth and tenth, just outside the line of the angle of the scapula. The fluid should be withdrawn slowly and careful watch be kept on the action of the heart and the respiratory movements.

64. **Sterility.**—The various causes of sterility in women are reviewed, including displacements, cervical constrictions, operative procedures, etc. Ovarian disease is also considered and Ill thinks that an abnormal thickness of the tunica albuginea is also a cause. He remarks in regard to Polk's recommendation of operation on the ovaries and adnexa for sterility that he thinks it has opened up a vast field of usefulness in surgery.

68.—This article has appeared elsewhere. See abstract in *THE JOURNAL* of October 4, p. 854.

69.—*Ibid.*, see *THE JOURNAL* of October 11, p. 916.

70.—*Ibid.*, title 74, p. 1005.

72. **Appendicitis.**—Greene claims that palpation is the first and most important procedure in making the diagnosis of appendicitis. As regards the actual acceptance of the case for life insurance, it would seem that the following rules might reasonably be laid down: Cases of non-suppurative appendicitis where the appendix has not been removed and primary union obtained, might be accepted after six months from the time of operation. Cases where no operation has been performed might be acceptable after an immunity from all symptoms for two to five years. Suppurative cases in which drainage has been established without removal of the appendix might be acceptable after two years of immunity from symptoms, and where the appendix has been completely removed, after one year. Cases of unoperated suppurative appendicitis with spontaneous rupture and bowel drainage may be acceptable after three years' immunity, and cases where there has been general peritonitis may be considered acceptable one year after the appendix has been successfully removed; after five years with complete immunity and restoration to health if recovery has been due to simple drainage operation. If treated medically it would be safer to require at least five years' immunity in all cases. These recommendations are based on the favorable report from the medical examiner and a substantial extra premium would be necessary if fistula or ventral hernia were present at the time of examination. Occupation ought to be a factor of importance if there is liability of strain.

73. **Race and Mortality.**—Hoffman reviews the United States census reports, giving tables of the comparative mortality of the white and colored population, showing a nearly

double proportion in the latter, and of the native and foreign white, while the native stock seems to have a decided advantage at most ages above infancy. The comparative mortality of the principal nativities is also tabulated, which shows that outside the negro population the greatest death rate appears in the Irish and German, while the Polish show a comparatively small ratio. A comparative mortality from specific disease shows the same approximate ratio between white and colored in consumption, pneumonia and typhoid, excepting in the white females where the typhoid mortality is greater than among the colored. Cancer seems to have its greatest mortality among the Germans, Irish and Italians. The mortality from disease of the female generative organs is highest among colored women, followed by Italian, the Poles showing the lowest rate. Affections of pregnancy, or the results of childbirth, caused the highest relative mortality among the Italian women. He concludes that race and nativity materially modify the mortality and special disease liability, but further observations and investigations are required before it will be possible to establish general laws useful for life assurance purposes. He concludes with the suggestion that insurance examiners can do no more important service than by occasionally contributing observations of their personal experience with cases of different nativity or parentage.

85. **Leucocytosis in Lead Workers.**—Boston finds that the patients in the Philadelphia hospitals from various lead works show a leucocytosis ranging from 4000 to 25,500 cells per c.mm. The average number of leucocytes in this series was 12,600. He reports in detail the blood examinations with brief remarks as to the general clinical pictures.

86. **Hemorrhage in Typhoid.**—The exact etiology of hemorrhage is hard to explain. Curtin has never seen it in very young children, and he thinks that there are conditions other than anatomic ones that exert some influence on the escape of blood from the blood-vessels. As instances, he reports cases where mental emotion seemed to stop the hemorrhage. The pathology, of course, is erosion in the intestinal canal. In diagnosis the first requisite is to have on guard some one competent. He had a nurse once who took the subnormal temperature due to internal hemorrhage to be a favorable sign. When hemorrhage ceases the temperature usually rises again nearly to its former height, and in some cases even higher. He thinks that often, even with severe symptoms, the patient may recover; the prognosis is not a hopeless one. The associated conditions that seem to be most serious in the severe cases are given by him as follows: "1. Renal disease, which sometimes alters the blood, in some cases rendering it less coagulable and thus favoring hemorrhage from all points. 2. Marked organic heart disease, in which the blood, being impoverished and lessened in quantity, is propelled slowly, causing the tissues to be only imperfectly supplied with blood. Under these circumstances, a hemorrhage from the bowel becomes a most grave complication. 3. Hemophilia, in which the blood becomes so altered there is little likelihood of the hemorrhages being staunched and much liability to other hemorrhages. 4. A tympanitic distention of the abdomen with the continued discharge of black, clotted blood, which is a very serious condition, as the blood-vessels are kept patulous by the distention of the intestines; or the latter and the blood-vessels have both lost their contractile power, thus favoring relaxation, not only of the bowel, but also, of the walls of the blood vessels. I always dislike to see this condition in hemorrhage from the bowels. 5. Obstinate diarrhea and vomiting, which are decidedly unfavorable to the staunching of the blood." He has found the usual remedies to be of more or less value, and he has great faith in turpentine externally and internally. He also recognizes the advantage to be derived from suprarenal extract internally, and in extreme cases he has seen the efficacy of placing ligatures around the limbs during hemorrhage. He concludes with a quotation from a paper read by him on the statistics of 60 cases before the American Medical Association in June, 1897.

87. **Abdominal Pain in Typhoid.**—The causes of abdominal pain, colic, distention, enterocolitis, ulceration, phlebitis, appendicitis, ileus, septic peritonitis, etc., are noticed by Allyn,

with their special symptoms. He thinks we need more information as to the premonitory symptoms and a keener appreciation of pain as a danger symptom. Leucocytosis needs special consideration. He insists that pain and tenderness are not necessarily accompaniments of typhoid fever; on the contrary, they may be signs denoting the approach of actual onset of cholecystitis or perforation. Pain is frequently a danger signal. It should lead to a more careful study of the cause, more frequent visits and a careful record of the observations. Where there is reason to suspect cholecystitis, perforation or peritonitis the surgeon should be called in.

88. The Diet in Typhoid.—Robertson discusses the various ideas in regard to diet and holds that the food is not responsible for recrudescence and relapse in this condition. We should not withhold it on this basis. No matter what treatment has been adopted, the mortality is not materially increased, as shown by statistics. He quotes from Fitz, Bushuyev, Sartsievich and Shattuck as to the advantages of a more generous diet. The objections to it are necessarily theoretical, but, judging from the published reports, the death rate from the well fed is a little less than those on a liquid diet, but the prevailing type of disease must be the chief factor. He says free feeding will undoubtedly serve to diminish the number of deaths from asthenia and infection due to lessened resistance.

89. Typhoid Perforation.—The dangers of typhoid perforation may be attributed mainly to two causes: 1. Delay in operating, chiefly on account of imperfect diagnosis. We should study our cases more and be able to diagnose the disease quickly. 2. To surgical errors of judgment and technic. Le Conte discusses this subject under four headings: 1. Shock. He disagrees with surgeons who hold that when shock is present operation should not be undertaken for some hours later or until reaction has occurred. Every hour that the perforation remains open the greater the danger from leakage and the larger the extent of peritonitis. Therefore, operation should be immediately undertaken. 2. Incision. In 85 or 90 per cent. of cases the perforation will be found in the last 20 or 30 inches of the ileum, or in the cecum or appendix. In 10 or 15 per cent. other portions of the small and large intestine, notably the sigmoid flexure, which after the cecum is the most likely place to look for perforation. Le Conte's rule, therefore, is to make an incision directly through that portion of the bowel most likely to be affected, namely, in the right semilunar line below the umbilicus, and at once expose the head of the colon. Starting at this point the last three or four feet of the ileum are examined, next, the cecum and appendix, and then the ascending colon as far as it can be exposed. If no signs of peritonitis are discovered, he would consider that an error in diagnosis had been made and discontinue further operative interference. If, however, peritonitis is found to be present, but perforation is missed, he would continue the search by making a median incision, examining the sigmoid flexure, descending and transverse colon, and then the remaining small bowel in the order named. We should remember that the perforation may be completely hidden from sight by lymph, and, therefore, all areas that are indurated or covered with lymph should be most carefully examined. When the perforation is of such a size that the closure of the opening will not produce a too marked stenosis of the bowel, it should be sutured at once, either transversely or longitudinally to the lumen, whichever way produces the least narrowing of the tube, and no time wasted in paring the edges of the ulcer. A running Lembert suture is not advisable as it might tear out; an interrupted Lembert mattress suture is best. After closing the opening other perforations should be looked for, as in 17 or 18 per cent. the openings are multiple. Dark necrotic spots should be treated as though perforation had taken place, and the weakened areas folded in with sutures. If simple closure is not practicable on account of the size of the opening, the condition of the bowel, or the number of perforations, several methods are open. 1. A plug of omentum may be fashioned to fit the opening, held in place with stitches, not as a patch is applied to a garment, but like a cork in a bottle. He has seen this done by Nature's processes alone. 2. Resection of the bowel. This is a long operation and a severe one,

which is against its success. 3. The formation of an artificial anus. This would only be practicable in a single perforation, and might require a second dangerous operation to close the opening. If this is chosen, the bowel should be stitched to the muscle or fascia, and not to the skin of the abdominal wall, so as to favor as much as possible a later spontaneous closing of the opening. 4. Cutting off the damaged area of the intestine from the general peritoneal cavity by walls of gauze. This imitates Nature's method, requires but a short time, and can be done with ease and a large area of bowel can be isolated. In this way he has walled off the last two feet of ileum, cecum and part of the ascending colon with perfect success. Some portions of the bowel gave way the next day, with the formation of fecal fistula, but at the end of four weeks the openings spontaneously closed. He would prefer the plug of omentum in a very limited number of cases, where it is applicable, and for the others, walling off with gauze, leaving resection of the intestine or the formation of an artificial anus for the exceptional case. In rare cases where the perforation has produced a well-walled-off abscess, as seen in appendicitis, if the incision through the abdominal wall opens this cavity, he would be content to institute drainage, after gently sponging the cavity, and not attempt to find and suture the opening. If, however, the anterior abdominal wall does not form a part of the abscess wall, the tumor should be walled off with gauze, the adhesions broken open and the perforation sought for and dealt with radically. Short operations are generally well borne, but long ones are usually fatal. He gives the details of the peritoneal toilet and drainage, careful cleansing of the infected coils, etc. He thinks that flushing the whole abdominal cavity with limited signs of peritonitis, is dangerous as it may disseminate the infection. He, therefore, prefers cleansing limited areas in the abdomen with dry sponges, trusting to proper drainage to prevent further spreading of the infection. When the peritonitis, however, is extensive a copious douche must be resorted to. The cavity must be flushed with large quantities of hot water while the intestines are outside, while the hand gently stirs the water round to bring it in contact with all the peritoneal surface. The intestines are then douched and cleansed outside the abdomen and returned, and free drainage is instituted. In closing the abdomen only such sutures should be used as are necessary to keep the intestines in their proper place. The rest of the wound should be filled with gauze to secure the best possible drainage. It is his custom to raise the head of the bed to aid the fluids to gravitate to the pelvis. He thinks that delay is far more responsible for mischief than surgical errors in judgment.

92. Urinalysis.—Crismond insists on the importance of the urinalysis, paying special attention to the cleanliness of the utensils, examining 24-hour samples and the importance of the quantitative test by the centrifuge. This, in addition to a microscopic examination, makes a scientific diagnosis.

94. Filariasis.—Austin reports a case in a physician aged 53 who had been a resident in the country for 40 years, with no record of foreign travel. The diagnosis was ptomain poisoning, but careful examination of the blood revealed the sheaths of embryos of the *Filaria sanguinis hominis*. He thinks he had in the case not only the involvement of the kidneys, but also some parenchymatous vascular changes in the liver.

95. Adrenalin.—Campbell reports three cases of the use of adrenalin chlorid in 1 to 1000 solution, 15 drops three times a day internally, for profuse uterine hemorrhages following polypi or fibroids. Other remedies had failed, but this was satisfactory from the very beginning of treatment.

97. Sub-Conjunctival Inflammations.—Gradle describes what he thinks is a not altogether rare lesion—hitherto not definitely named—consisting in a patch of inflammation in the sub-conjunctival tissue over the eye-ball and not quite identical with episcleritis. It is irregular in size and shape, inward and outward from the cornea, oftener below than above the horizontal meridian, more commonly single than multiple, is slightly but distinctly swollen and marked by congested conjunctival vessels, beneath which there is a variable injection of the deeper vessels of a violet hue.

between it and the corneal margin; more rarely it extends to the limbus and ends abruptly with a steep change of level. The marginal inflammation may be mistaken for circumscribed symptomatic ciliary injection. It differs from typical episcleritis by being distinctly more superficial, not nodular, and leaving no slaty discoloration, and, as a rule, yields better to treatment. There are, however, transition forms between the two. Symptoms are limited to irritability and weakness of eye, varying with the intensity of the inflammation. It may be a manifestation of serofulous ophthalmia, but is more often, in adults, due to acute conjunctivitis inefficiently treated. He has also seen it occur as a vesicle, probably a herpes febrilis; he has also observed it in a relapsing form in diabetes. It has been described also in its relapsing type by Graefe as "subconjunctivitis," by Hutchinson as "hot eye" and by Fuchs as "episcleritis periodica fugax," due to rheumatism, malaria, and often to unknown causes. The non-relapsing or non-recurring type here noticed seems to have been undescribed.

107. **Hyperchlorhydria.**—Stucky finds that hyperchlorhydria exists as the result of a primary lesion of either the liver, spleen, pancreas, and sometimes of the kidneys, and that while it does occasionally occur as a neurosis, it is a rarity. In the majority of cases it is a secondary affection due to organic or functional lesions in some part of the body and may at times be associated with some constitutional affection.

108. **Inebriety.**—This article is similar to §4, which see. The etiology must be studied by medical men from the physiologic point of view and only with long-continued and accurate observation can it be understood.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures and single case reports are omitted unless of exceptional general interest.

British Medical Journal (London), October 18.

- 1 Introductory Address at the Opening of the University College, Liverpool, "A Modern Religio Medici." Frederick Treves.
- 2 *On Exaltation of Bacterial Virulence by Passage Outside the Animal Body. E. W. Ainley Walker.
- 3 Recent Progress in the Housing of the Insane. George W. Mould.
- 4 A Discussion of the Treatment and Care of Persons in the Early Stages of Unsoundness of Mind. John Sibbald.
- 5 The Hospital Treatment of the Insane as Carried Out at the London County Asylum, Bexley. C. Hubert Bond.
- 6 *A Discussion on the Relation of Neurasthenia to Insanity. T. Clifford Allbutt.
- 7 *On Apprehensiveness, Stupor and Katatonie. Robert Jones.
- 8 *A Discussion on Syphilis as a Cause of Insanity. F. W. Mott.
- 9 *Action of Heroin and Dionin on the Respiration. C. R. Marshall.
- 10 The Digestibility of Fats and Oils, with Special Reference to Emulsions. John W. Wells.
- 11 *Synthetic Purgatives: The Purgative Action of Dihydroxy-Phthalophenone (Phenophthalein, Purgin). F. W. Tunnicliffe.
- 12 The Therapeutic Value of Arsenic and the Justification of Its Continued Use in the Light of Recent Observations Concerning Its Toxic Action. Ralph Stockman.
- 13 Arsenic in the Treatment of Chorea. Frank M. Pope.
- 14 On the Therapeutic Value of Cantharidine. Oscar Liebreich.
- 15 The Pharmacological Action of Mannitol Pentantrate. C. R. Marshall and J. H. Wigner.
- 16 The Materia Medica of the Intratracheal Treatment of Pulmonary Diseases. Colin Campbell.
- 17 The Local and General Treatment of Diphtheria. Nestor Tirard.
- 18 *Pure Urea in the Treatment of Tuberculosis. Henry Harper.
- 19 The Action of Acids upon Voluntary Muscles and Blood Vessels. R. B. Wild and J. N. Platt.
- 20 Some Suggested Standards for Pharmacopoeial Preparations. J. C. McWalter.
- 21 On the Pharmacological Action and Therapeutic Employment of Pseudoconitine and Japaconitine. J. Theodore Cash.
- 22 On the Use of Alkalies in Relieving Pain. Lauder Brunton.
- 23 Hypodermic Purgatives. Walter E. Dixon.

The Lancet (London), October 18.

- 24 *Some Morbid Conditions of the Mouth. Edmund W. Roughton.
- 25 *The Treatment of Psoriasis with Myelocene. D. Chambers Watson and J. A. Douglas Thompson.
- 26 Nasal Obstruction and Deformities of the Upper Jaw, Teeth and Palate. Mayo Collier.
- 27 Cancer of the Esophagus without Obstruction. J. G. Emanuel.
- 28 The Treatment of Atonic Dilatation of the Stomach by Means of High-Frequency Currents. Alexander Crombie and T. J. Bokenham.
- 29 Notes on a New System of Treatment in Pulmonary Phthisis. Duncan Turner.
- 30 Malignant Tumor of the Kidney in Childhood. J. Eustace Webb.
- 31 Medical Profession in Relation to the Army. William Taylor.

Journal of Tropical Medicine (London), October 1.

- 32 Sleeping Sickness and Filaria Perstans in Busoga and Its Neighborhood, Uganda Protectorate. Aubrey Hodges.
- Annales Pasteur (Paris), September.
- 33 Recherches sur quelques bacilles anaérobies et leur différenciation. P. Achalmé.
- 34 Neutral Red. I. Himmel.—Le rouge neutre. Son rôle dans l'étude de la phagocytose en général et dans celle de la blennorrhagie en particulier.
- 35 Sur les cils (flagella) composés. E. Malvoz.
- 36 Sur la dissociation des propriétés agglutinante et sensibilisatrice des sérums spécifiques. A. Dubois.
- 37 Recherches sur le microbe de la "loque" (bee disease). U. Lambotte.

Bulletin de l'Acad. de Med. (Paris), October 7, lxvi, 31.

- 38 Study of 580 Cases of Diphtheria. Josias.—La diphthérie à l'hôpital Bretonneau.
- 39 Anti-Malaria League in Corsica. A. Laveran.—L'assainissement de la Corse.

Revue de Chirurgie (Paris), October.

- 40 *Ostéotomie et ostectomie fémorale dans les ankyloses vicieuses de la hanche (hip), et dans certaines fractures vicieusement consolidées du fémur. E. Vincent.
- 41 Singulière anomalie de développement du foie (of liver). E. Salvia.
- 10 *Massage of Exposed Heart. M. Boureau.—La massage du cœur mis à nu.
- 11 *Des greffes (grafts) hydatiques post-opératoires. F. Dévé.
- 12 Note sur la cure opératoire des hernies plus spécialement envisagée dans le milieu militaire. L. Richard. (Commenced in No. 9.)
- 13 De la fracture de Dupuytren. Moyens de contention. Amyotrophies réflexes. Déviation secondaire. Consolidation vicieuse. Mally and Richon. (Commenced in No. 8.)

Semaine Médicale (Paris), October 8.

- 14 Tuberculome hypertrophique du cecum; Diagnostic différentiel des tumeurs de la fosse iliaque droite. Dieulafoy.
- 15 La percussion et l'auscultation osseuses combinées comme moyen de diagnostic et de localisation des fractures. J. Plesch (Rajecz, Hungary).

Berliner Klin. Wochenschrift, xxxix.

- 16 (No. 36.) Ueber Herpes laryngis (menstrualis), nebst Bemerkungen über den menstruellen Herpes. Bettmann.
- 17 Beitrag zur Hämatopoiese. A. Wolff.
- 18 *Long Incubation of Rabies. T. Kasparek.—Ueber einen Fall von Ausbruch der Tollwuth sieben Monate nach der Pasteur'schen Schutzimpfung.
- 19 Correction of Large Deforming Noses. J. Joseph.—Ueber einige weitere operative Nasenverkleinerungen.
- 20 (No. 37.) Intraglobuläre Methämoglobinämie. S. Talma.
- 21 Ueber das Zustandekommen der inspiratorischen Glottisverengung (constriction) bei doppelseitiger Posticus-Paralyse. Dorendorf.
- 22 Ueber die hämolytischen Eigenschaften (properties) von Organ-Extracten. S. Korschun und J. Morgenroth.
- 23 Essence and Treatment of Congenital Dislocation of Hip-Joint. Joachimsthal.—Beiträge zur Lehre von dem Wesen und der Behandlung der angeborenen Verrenkungen des Hüftgelenks. (Commenced in No. 36.)
- 24 (No. 38.) *Transmission of Human Tuberculosis to Cattle. J. Fibiger.—Uebertragung der Tuberculose des Menschen auf das Rind.
- 25 Ueber multiple hereditäre Exostosen. Jungmann.
- 26 Laparotomie hypogastrica extraperitonealis zur Heilung des Gebärmutterkrebses (uterovaginal cancer) und des Mastdarmkrebses (rectal cancer). A. Mackenrodt.
- 27 (No. 39.) Ueber einen operativ behandelten Fall von Rückenmarkstumor (spinal tumor). H. Oppenheim.
- 28 Action of Alcohol on Metabolism. A. Clapart.—Ueber die Einwirkung des Alkohols auf den Stoffwechsel des Menschen.
- 29 Zur Obstipatio spastica. Von Sohlern.
- 30 Ueber die Wirkungsweise des Cobragiftes (cobra venom). P. Kyes. (Commenced in No. 38.)
- 31 No. 40.) Akroparaesthesien nach Trauma. M. Sommer.
- 32 Tse-tse-Krankheit in Togo (West Africa). H. Ziemann.
- 33 Zur Einheit (unity) der Streptokokken. F. Meyer.
- 34 Study of Mercurial Dermatoses. E. Hoffmann.—Ueber Quecksilberdermatitis und die ihr zu Grunde liegenden histologischen Veränderungen, nebst Bemerkungen über die dabei beobachteten lokale und Blut-Eosinophilie. (Commenced in No. 39.)

Centralblatt f. Chirurgie (Leipsic), October 11 and 18.

- 35 (No. 41.) Die intracapsuläre Prostata-Resection als Normal-Verfahren bei Prostata-Hypertrophie. L. Rydygier.
- 36 Thermophor-Spritze (Syringe) zur Paraffin-Injection. C. Ewald.

Centralblatt f. Gynaekologie (Leipsic), October 11 and 18.

- 37 (No. 41.) Ueber Durchgängigkeit (permeability) der Tuben. F. Ahlfeld.
- 38 *Die doppelseitige Unterbindung der Aa. hypogastrica und ovarica zur palliativen Behandlung des Uterus-Carcinoms. Krönig.
- 39 Improved Dilator. O. Kaiser (Dresden).—Zur schnellen Erweiterung des Muttermundes nach Bossi.
- 40 Application of Clamps and Ball Forceps in Obstetric Cases. H. Quellsner.—Zur Verwendung von Klemmen und Kugelzangen in der Geburtshilfe.
- 41 New Combined Suture Instrument. O. Kaiser (Dresden).—Ein neues Nähinstrument.
- 42 (No. 42.) Zur Geschichte der fetalen Theorie über die Ursachen der Eklampsie. J. M. C. Mouton.
- 43 Ueber anaerobe Bakterien und ihr Vorkommen bei fetiden Eiterungen (suppurations). A. Wallgren.
- 44 Fall von Chorionepithelioma malignum. O. Schmidt.

Dermatologisches Centralblatt (Berlin), October.

- 45 Ueber Urethritis petrificans und Steine der Harnröhre (urethra). J. J. Karvonen.
 46 *Zu einer Prophylaxe des Tabes und Paralyse (und vielleicht syphilitischer Nachkrankheiten überhaupt). P. Cohn.

Deutsche Med. Wochenschrift (Leipsic), October 9.

- 47 Study of Albumin Precipitins. L. Michaelis.—Untersuchungen über Eiweißpräzipitine.
 48 Ueber hämolytisches Blut-Plasma. G. Ascoli.
 49 Zum Nachweis der Milchsäure (lactic acid) im Magensaft (in gastric juice). Bünniger.
 50 Fall von hochgradiger cystischer Erweiterung (dilatation) des Ductus choledochus. M. J. Rostovtzeff.
 51 *Gangrene of the Skin After Subcutaneous Infusion. E. Wormser.—Ueber Hautgangrän nach subkutaner Infusion.
 52 Ein Beitrag zur Pentosurie. F. Kallisk.
 53 Atrabilla in der Urologie. S. Goldschmidt.
 54 *Prevention of Snoring. K. Küster.—Zur Verhinderung des Schnarchens.

Muenchener Med. Wochenschrift, October 7.

- 55 *Die Differentialdiagnose der Neurasthenie. Kraepelin.
 56 *Die Bedeutung gewisser Lungen-Erkrankungen. G. Kraepelin.
 57 *Relations between Bladder Affections and Myomata. W. Hahn.—Ueber die Beziehungen zwischen Blasenerkrankungen und Myomen mit Rücksicht auf die Prognose derselben.
 58 *Ueber die post-operative Harnverhaltung (retention of urine) und deren Folgen. F. Taussig.
 59 Nervous Radiations in the Domain of the Urinary Organs. W. Hirt.—Ueber nervöse Irradiationen im Gebiete der Harnorgane.
 60 Therapeutics in Russia in XVII Century. M. Lachlin.—Geschichte der Therapie im XVII Jahrhundert in Russland.

Therapeutische Monatshefte (Berlin), September.

- 61 Treatment of Diabetes Mellitus. H. Eichhorst.—Behandlung der Zuckerharnruhr.
 62 Severe Case of Scarlet Fever Apparently Benefited by Injection of Normal Blood Serum. C. S. Engel.—Ueber einem mit normalem Blutserum behandelten Fall von schwerem Scharlach.
 63 Der Bad (bath) als Infections-Quelle. Winternitz.
 64 *Ueber ein neues Blut-Reagens und dessen Empfindlichkeit für den kristallographischen Blutnachweis. C. Strzyzowski.
 65 Ueber Intrauterin-Pessarieren. Hollweg.
 66 Ueber Pyrogalloltriacetat-Behandlung nicht-parasitärer Hautaffektionen (dermatoses). W. N. Clemm.
 67 Ueber die toxicologischen Eigenschaften (properties) des Lysoform. F. Nagelschmidt.

Therapie der Gegenwart (Berlin), September.

- 68 *Time Required for Absorption of Fat Through the Rectum. E. W. Baum.—Ueber den zeitlichen Ablauf der rectalen Fettresorption.
 69 *Internal Gelatin Treatment of Hemophilia. Hesse.—Innerliche Gelatine-Behandlung bei Hemophilie.
 70 *Minin's Blue Electric Light in Therapeutics. Daniloff.—Beitrag zur Frage der therapeutischen Anwendung des blauen electrischen Lichts.
 71 *Treatment of Mental Diseases with Saline Infusion. H. di Gasparo.—Ueber die Kochsalzinfusionstherapie bei Geisteskrankheiten.
 72 Foreign Bodies in Male Urethra and Psychology of Such Cases. C. Posner.—Fremdkörper in der Harnröhre des Mannes, nebst Bemerkungen über die Psychologie solcher Fälle.
 73 *Gonorrhoe and Gravidität. L. Fürst.
 74 Relations between Chemical Constitution and Pharmacologic Action. B. Laquer.—Beziehungen von chem. Constitution und pharm. Wirkung. Critical Review.
 75 Ueber die physiologische Dosirung von Digitalispräparaten. A. Wolff.
 76 Aspirin in der Therapie der Lungentuberkulose. H. Cybulski.
 77 Quinin in Internal Hemorrhages. A. Hecht.—Zur Behandlung innerer Blutungen.
 78 Suggestion for Reform of Contract Practice. M. Sussmann.—Ein radicaler Vorschlag zur Reform des Krankenkassenwesens.

2. Increase of Bacterial Virulence in Vitro.—In this seventy-second report of the Scientific Grants Committee, Walker reports experiments on the increase of virulence of bacteria by repeated artificial cultures in the test tube. The typhoid bacillus was used and the tests of virulence were made on guinea-pigs. Necropsies were performed on all the animals that died and the organism found examined microscopically and culturally to ascertain its identity and presented the characteristics of the *Bacillus typhosus*. Comparisons were also made of the relative number of bacilli in the emulsions. The conclusions reached were that the virulence of the bacteria may be increased by passage through the bacteriolytic fluid *in vitro*. The practical bearing of these observations and their relation to certain of the problems of infection and immunity are apparent. The increase of bacterial virulence which may be brought about by passage through the body of the living animal is probably attributable to the effect of the successful resistance of surviving micro-organisms to the bactericidal action of the living tissues.

6. Neurasthenia and Insanity.—Allbutt gives a theory of neurasthenia that it is an individual weakness by which exhaustion takes place over repair and a lowering of the nervous potential with imperfect recovery. He contrasts it with hysteria, which is a special abnormal interference with special inhibitions. Hypochondriasis is not a step between neurasthenia and insanity, nor is it insanity, though close to it. It consists in a fixed idea which seems to closely approach delusion, but does not cross the narrow line as often as might be expected. Neurasthenia with obsessions he is inclined to think is nearer insanity, especially when they are such as an internal call to do some wrong or to satisfy some morbid desire are they more characteristic of insanity than neurasthenia. The relation of neurasthenia to insanity requires close attention to diagnosis and he distinguishes the early stages of melancholia or delusional insanity or general paralysis which may simulate it very closely. Unlike some other authors, he remarks that the memory in neurasthenia loses its tenacity, the attention is enfeebled, but sharply defined breaches of memory are more characteristic of hysteria or epilepsy, and he has never seen them in neurasthenia. Depression of spirits, if primary and persistent, is more characteristic of melancholia or hyperchondriasis. Of late years he has observed a sort of post-operative neurasthenia following certain operations, not always severe ones, more common in women than in men. It is very like the neurasthenia of railway cases, and whether due to the anesthetic or the mental strain, etc., is hard to say. He mentions it to ask if this post-operative neurasthenia is some lingering phase of an earlier acuter disturbance known as post-operative insanity.

7. Katatonia.—Jones considers katatonia not as a separate type, but as a special syndrome in other forms of insanity, more especially the cyclic forms. In his experience it almost invariably is preceded by a period of apprehensiveness, which is itself preceded by irritability, headache or pain, and a sort of panophobia. This is followed by a condition of muscular tonus and stupor. This apprehensiveness with high muscular tension means low blood pressure, and probably also means a diffusion of nerve power, and an absence of volitional control. He has studied cases as regards the blood pressure and finds it varying from 80 to 110 mm. of mercury. It indicates a corresponding impairment of the general metabolism. In some cases marked excitement alternates with the stupor, the change sometimes being sudden. The tendency is generally toward dementia. He speaks particularly of the moral causes, together with over-pressure in education, etc., in its etiology. Its pathology is probably a special form of nutritional impairment in the neuron. The swollen nucleus with granular degeneration of the Nissl bodies, the disappearance of fiber plexuses, and the changes in the deeper layers of the cortex, caused by the destruction of the neurons and increase of the glia tissue, which are described as the pathologic appearances in cases of katatonia, may help us to account for the symptoms.

8. Syphilis in Insanity.—Syphilis may cause insanity, according to Mott: 1, by moral shock; 2, by the effect of the poison and anemia on the general nutrition; 3, the specific poison may cause inflammation affecting the enclosing, supporting and nutritive tissues of the brain, producing meningitis, usually basal, gummatous tumors, endarteritis and periarteritis. Most of these cases occur in young males within four years after infection, and they frequently run a rapid course in spite of treatment. The severer forms closely resemble general paresis, but he points out certain differences: The coarser paralysis and the involvement of special cranial nerves, nocturnal headache, tenderness on percussion, etc. Perhaps pseudo general paralysis is an applicable term, but syphilitic brain disease is, he thinks, the best, for, of all the forms of insanity, this may be looked on as a special organic brain disease with mental symptoms: Moreover, it is one of the most amenable to treatment of all the severe forms of insanity. 4. Syphilis is a cause, and a very potent one, of arterial degeneration, arteriosclerosis. 5. He raises the question as to the relationship of syphilis with general paresis and adduces the usual arguments in favor of this connection. He remarks that he

has never seen a general paralytic with a primary sore or secondary eruption among the many hundreds he has examined, and considering the frequency with which these expose themselves, he thinks this can be best explained by the immunity afforded by the previous infection. In order to excite discussion he affirms the proposition, "no syphilis, no general paralysis."

9. Heroin and Dionin.—The action of heroin and dionin on the respiration is studied experimentally by Marshall, who employed anesthetized rabbits with the tambour method to show the changes. He finds that heroin can prolong inspiration and increase its depth, but the results of its beneficial action are very soon past and slowing is ultimately produced. Dionin appears to be slightly more sedative than codein, but otherwise has the same action. Heroin has a much greater effect on the respiratory center, but he doubts whether this will prove of much use therapeutically. The results of its beneficial action are too narrow.

11. Phenolphthalein, Purgen.—The purgative action of this substance was apparently found accidentally. Phenolphthalein being considered a harmless drug, was used by the Austrian Government to earmark a certain class of wines, and the resulting diarrhea produced in the drinkers called attention to this action of the drug. The purgative action is much more marked in man than in animals, which is credited by Vamossy to the fact that in the latter the conversion into sodium salt either does not occur or only to a very slight extent. The conclusions reached by the author are: "1. For children, phenolphthalein in doses of from $\frac{1}{4}$ to $2\frac{1}{4}$ gr. (one to three tablets of infant purgen) is a useful aperient. 2. For ordinary adults, this drug must be given in doses of from $1\frac{1}{2}$ to $4\frac{1}{2}$ gr. (one to three tablets of adult purgen). 3. In cases of obstinate constipation, the dose must be increased to 15 gr. (one to two tablets of strong purgen). 4. Phenolphthalein produces purgation in jaundice. It has no irritating action on the kidneys; its depressant action on the circulation is less than that of magnesium sulphate."

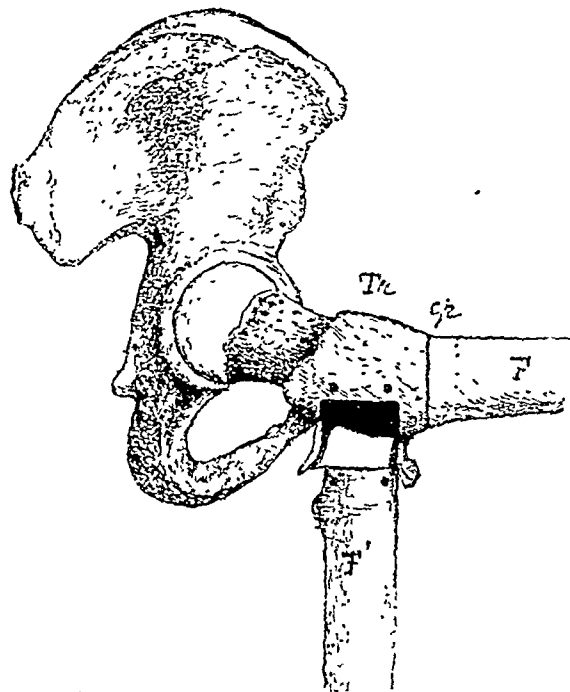
18. Urea in Tuberculosis.—Harper gives a lengthy tabulation of cases in which his treatment of tuberculosis with urea was employed, and he says it fulfills many of the requirements. It is not corrosive, can be given in sufficiently large doses, and is not a substance foreign to the economy. He begins with 20-gr. doses, and gradually increases up to 80, 90 or 100, three times a day between meals. If any gastric symptoms appear he discontinues it for a few days and begins again. Only pure urea should be used, as the commercial form used in dyeing causes vomiting and diarrhea. He calls attention particularly to the fact that 3 per cent. of pure urea added to a virulent culture of tubercle bacilli in an incubator kills the organisms. In mixed infection he gives along with the pure urea, calcium sulphid in $1\frac{1}{2}$ and 2 gr. pills, four or five pills daily for any of the streptococcal infections. In proportion as he has increased the nitrogen in tuberculosis, the death rate has lessened. During the last twelve months he has only signed one-fourth as many death certificates as compared with two years before.

24. Mouth Bacteria.—In this second lecture Roughton discussed the toxic bacteria in the mouth, calling attention to the fact that saliva has long been known to be at times poisonous, and mentioning the infection which has been known to follow dental operations, pyorrhea alveolaris, etc., various forms of stomatitis and the relation of oral bacteria to the disturbances of digestion, pulmonary infection, infection of the cervical glands, etc. He quotes Dr. G. W. Cook, Chicago, as to the existence of tubercle bacilli in carious teeth. Other infections are mentioned, as are also the dangers of infection of the mouth as a source of infection to others.

25. Psoriasis.—Watson and Thompson recall that on March 22 one of them reported to the *British Medical Journal* the description of a preparation of bone marrow to which the name myelocene was given and the results which had been obtained with it in chronic ear disease. They publish the present article to record the results obtained by the treatment of psoriasis with this substance and report a number of cases. They say from the facts they feel justified in concluding that

myelocene contains a substance of distinct therapeutic importance for the treatment of psoriasis. Even this small number of cases here reported appear to warrant the conclusion. Certain constitutional symptoms, however, must be recognized, as toxic symptoms will undoubtedly follow the unskilful use of the substance. The questions which arise will be how far the dietetic and other conditions are unfavorably suited to the production of the vital substance, which is a therapeutic agent in myelocene, and 2, what alterations must be made in these conditions with a view to the production of this necessary constituent. In conclusion they lay special stress on the following points in the observation and study of psoriasis: "1. A careful examination, frequently repeated, of the stools, more especially as to the odor and consistence, with the view of determining to what extent the intestinal canal may be acting as a focus of absorption of toxic substances. 2. A similar investigation of the urine, especially noting the total amount passed daily, so as to supply evidence as to the renal activity and general cardio-vascular tone. Further important evidence on this latter point is obtained from (3) a study of the capillary reaction of the general skin surface. More information may sometimes be gained from a critical examination of the skin that is apparently healthy than of the skin that is obviously diseased."

40. Treatment of Vicious Ankylosis of Hip Joint.—Resection of the joint, or osteotomy of the neck of the femur exposes to the danger of arousing the tuberculous or pyogenic process, if it is not entirely extinguished. Vincent's method of treating vicious ankylosis of the hip joint consists in sawing the femur



across and fitting it in a niche made for it in the postero-inferior surface of the great trochanter. The soft parts are incised down to the bone for 12 or 15 cm., commencing at the farther end of the great trochanter, and turned back. The niche is then cut in the trochanter as wide as the diameter of the femur and about one centimeter deep. The femur is then divided at the line shown in the cut and is brought down and fitted into the niche as a carpenter fits a tenon into a mortise. The femur is then vertical instead of more or less horizontal, and the flaps of periosteum are fitted over the raw parts. Cp. in the cut means collar of periosteum reaching to the dotted line, left after the femur has been removed. The wound is drained through a counter-opening at the lowest point as the patient reclines. A cast is applied to immobilize the limb in extension and slight abduction. The fitting of the femur in the niche prevents all slipping and dispenses with a suture and the consequent danger of osteitis around foreign material. Implantation of the femur at this point diminishes the shortening of the limb by the entire width of the trochanter. No disturbances in the circulation need be apprehended, and as the field of operation is remote from the focus of preceding inflam-

mation in the joint, there is no danger of arousing it. The results are functionally perfect in the two cases that have been followed for twelve and two years. The limb has been straightened, the shortening reduced to the minimum and the solidity is perfect. Another case illustrates the benefit to be derived from application of Lorenz's screw in the course of osteotomy undertaken on account of a diaphysal fracture of the femur with pronounced chevauchement. The screw confers great power on the surgeon, with a convenience and precision far superior to manual traction. The patient was a lad of 14 who had been run over, sustaining a fracture of both femurs. After two and a half months of weight traction the ends of the bones still rode each other by 9 and 5 cm. The chevauchement was rapidly overcome with Lorenz's screw, and half the width of the end of each stump was cut out, forming two steps which fitted into each other as the bones were coaptated by the screw. He calls this the Z resection, or the "steps" (escalier). The stumps fit into each other and there is no further necessity for extension as the stumps hold each other in place. Vincent concludes by calling attention to the fact that many cases of supposed traumatic arthritis and peri-arthritis are in reality unrecognized fractures of the joint. They require what he calls a "cotton-silicate bandage" (ouato-silicaté) which soothes the pain, tends to diminish the effusion and prevents inflammation. If arthrotomy and suture are inevitable, he advises restricting the suture to the para-ostal parts rather than to introduce a foreign body into the bone itself. His article is profusely illustrated.

10. **Massage of the Exposed Heart.**—Schiff proposed in 1874 to open up the heart and restore its spontaneous action by rhythmical compression of the ventricles, but it was not until 1892 that surgeons conceived the idea of applying this so-called massage of the heart to the resuscitation of persons dying under chloroform. Boureau has been able to collect a dozen cases in which this has been attempted. The surgeons always reached the heart by resecting ribs and opening the pericardium through the pleura, until Poirier recently entered through the diaphragm. The patient having succumbed in the course of a laparotomy, he tore the diaphragm and massaged the heart through this opening from below. Maclaure also reached the heart through an incision in the diaphragm in a case recently reported. This route avoids the dangers of pneumothorax. In Tuffier's patient after rhythmic compression of the heart for two or three minutes, reached through the pleura, the organ began to contract, the patient sighed, the pulse reappeared, the pupils contracted and the wound was tamponed. After sighing a few times the pulse vanished again, but was again restored by renewed rhythmic compression of the heart, and the circulation was re-established for a few minutes, after which it subsided and could not be started again. It is possible that such maneuvers might succeed if they were done earlier. They have never yet been successful in the actual resuscitation of any person, although Prus and Batelli have succeeded on large numbers of dogs, especially after applying an alternating 240-volt current or a powerful electric discharge.

11. **Post-Operative Hydatid Grafts.**—Dévé states that both clinical and experimental data show that the scolex and the capsule as well as the daughter cysts may generate new hydatid cysts. In his experimental research the vitality of these hydatid germs could be completely destroyed by contact for 2.5 minutes with a 1 per 1000 solution of sublimate or a .5 per cent. solution of formol. He, therefore, suggests as a preliminary measure in ablating an echinococcus cyst to inject a parasitocidal .5 per cent. solution of formol and leave it in contact with the contents of the mother cyst for two or three minutes before attempting to remove the cyst.

12. **Long Incubation of Rabies.**—Kasperek has collected 22 cases of long incubation in the literature. They include 17 from 8 months to nearly 3 years; 2 at 5 years, and one each at 10, 18 and 20 years. In the case personally observed the child was bitten on the hand and arm and was taken at once to Vienna for Pasteur treatment with the other children bitten by the same dog, which was known to be rabid. Hydrophobia

developed seven months afterward; all the other children have remained healthy to date.

24. **Transmission of Human Tuberculosis to Cattle.**—Fibiger, of Copenhagen describes 5 cases of primary tuberculosis of the intestines, including 2 in children. Inoculation of calves with bacilli from them showed that the microbes were harmless, slightly virulent, virulent or extremely virulent in different cases. This ascending scale corresponded in inverse ratio to the duration of the affection and the age of the subjects. It is possible that the bacilli become less virulent for cattle the older the process in the human subject. This coincidence of primary tuberculosis in the intestines and the virulence of the infection for calves seem to suggest that they were cases of actual bovine tuberculosis in man.

38. **Ligature of Arteries as Palliative Treatment of Carcinoma.**—Krönig has operated on three patients with carcinoma of the uterus in an advanced stage by ligating the ovarian and hypogastric arteries on both sides. All hemorrhages ceased at once afterward, although they had been of daily occurrence before. In one case a hemorrhage recurred three months later, probably from the establishment of collateral circulation. The flow of pus was only temporarily suspended. It might be possible to combine excochleation of the carcinomatous masses with the ligatures. He ligated the hypogastric close to the common iliac artery, and the ovarian as it entered the broad ligament. In future he intends to ligate also the artery in the round ligament to prevent collateral circulation. Only a very small incision in the abdomen is required. He recommends in all cases of abdominal operation for the removal of uterine cancer, when the neoplasm is found inoperable, to ligate the arteries as described, before closing the wound. It can be done in five minutes.

46. **Prophylaxis of the After-Affections of Syphilis.**—Cohn regards tabes and progressive paralysis as the necessary result of the accumulation in the blood of the living bacterial and dead toxins from the latent neoformation of the syphilitic poisons. Mercurial treatment is of no avail at this stage and does only harm. The toxins have an elective action on certain portions of the nervous system after accumulating to a certain amount in the blood. This progressive, specific dysemia is apparent in the complexion of syphilitic subjects in the incipient stages of tabes. He suggests that it might be possible to ward off these after-affections by periodical, repeated venesection at long intervals. Withdrawal of a certain amount of blood would free the body from the toxins contained in it, and the new blood that would be produced to take its place would take up the struggle against the bacteria with fresh energy and an increased elimination of toxins would follow. As this measure of systematically repeated venesection would be harmless, he thinks that when the organism is once saturated with the syphilitic poison, it is our duty to employ it. He believes that it might be possible to induce local immunity against the primary infection by prophylactic local mercurial inunctions, systematically repeated at intervals, supplemented by mechanical and mercurial measures after possible infection. He also advocates multiple small injections of mercury in a circle around the primary lesion when it first develops. It is possible that the mercury may follow the germs into the glands and annihilate them there, in addition to its effect on the lesion itself. And when the disease is once thoroughly established the accumulation of the poisons in the blood must be combated by systematic blood-letting at certain intervals.

51. **Gangrene After Subcutaneous Infusion.**—Wormser replies to the communication from Baisch in Nos. 35 and 36 of the *Deutsche Med. Woch.*, reviewed in THE JOURNAL at the time, to the effect that the gangrene of the skin observed after subcutaneous infusion of Tavel's solution is not due to this fluid, as he has observed it after infusion of normal salt solution, and Welch, Bloodgood, and Zimmermann have reported similar cases in which only the normal salt solution was used. Brocq has observed cases of gangrene of the skin after injections of gray oil. [Tavel thinks that an artificial serum should be alkaline as well as saline, and many physicians and surgeons

are adopting his views. He never recommended his solution for subcutaneous use, as he explicitly states. His formula and its advantages were given in *THE JOURNAL* of June 7, p. 1545.—Ed.]

54. Prevention of Snoring.—A small cap fits over the chin and is held in place by a band around the head, fastened to the chin cap with elastic rubber bands. This allows perfect freedom to the lower jaw while at the same time it prevents its dropping down after the subject is asleep, and thus prevents snoring.

55. Diagnosis of Neurasthenia.—Kraepelin emphasizes the harm done by the indiscriminate diagnosis of neurasthenia in various nervous affections. The principal ones confounded with it are progressive paralysis, dementia precox, maniaco-depressive or circular insanity, and the neuroses due to fright, worry, fatigue, the phobias, etc. He describes various points useful in differentiating, and points out that treatment suitable for neurasthenia is directly injurious in some of these other nervous affections. In case of a phobia, for instance, rest and abundant feeding aggravate the trouble. The mild forms of maniaco-depressive or circular insanity are peculiarly liable to simulate neurasthenia, but the alternations with periods of high spirits, the rapid development of the symptoms, the emotional depression, the lack of will power and especially the weariness of life are striking in these cases. Differentiation is important, as suicide is more liable than in genuine neurasthenia, and must be guarded against.

57. Relations Between Bladder Affections and Myomata.—Hahn considers the voluntary retention of urine for hours at a time, common among women, as one of the most prolific causes of bladder troubles later. Another important cause is the displacement of the uterus, and tumors in it, especially myomata. Antelexion of a non-movable uterus, especially during the menstrual period, when it is heavier and the nerves of the region are irritated by the hyperemia, may entail severe bladder disturbances. These are exaggerated if there happens to be a myoma in the uterus. An apparently harmless myoma may, therefore, be the source of a chronic bladder affection or by compression on the ureters may cause urinary disturbances, and if the vessels are compressed there may be varicose veins. Varices can frequently be traced to a myoma, not necessarily very large. Removal of the myoma has in his experience cured a number of such cases and delivered the patients at one stroke from their bladder affections, except in those of exceptionally long standing.

58. Post-Operative Retention of Urine.—Taussig refers to the recent discovery that the essential process in the evacuation of the bladder is depression of the sphincter-tonus. He also calls attention to the frequent occurrence of retention of urine for twenty-four to forty-eight hours after operations, and in particular after those on the female pelvic organs. He tabulates the operations of this kind that have been done at the Bettina at Vienna, 282 in all, during 1899-1901. Post-operative retention was noted in 60 for more than three days, and in 43 for more than six. Retention was most frequent by far in operations entailing extensive detaching of the bladder from its surroundings, and removal of a large portion of the parametrium. This does not induce disturbances in the circulation, as is evidenced by the fact that the urine remains clear and without cellular debris until after the almost inevitable cystitis has made its appearance. He is convinced that the trouble is due to disturbance in the innervation of the bladder caused by the extensive mutilations around it. Treatment, therefore, should be addressed to the innervation of the bladder. The cystitis developed usually about the sixth day and occurred, notwithstanding minute precautions. In some cases the bladder infection was evidently derived from the intestines, as no catheter had been used. In treating the retention, intravesical faradization was found effective in some cases. In two cases expectant treatment for thirty hours was followed by spontaneous urination. Possibly the distension of the bladder walls in these cases stimulated the ganglia located in them. In 5 cases the urethra was dilated in the hope to diminish the tonus of the

sphincter by this procedure. It proved successful in 2 but failed in the 3 others. Spontaneous urination almost always followed the getting up of the patients. But this was not possible until such a late date that the cystitis was already established by that time. In treating the cystitis it was found that urotropin had certainly an inhibiting effect on the bacteria, but it ceased on suspension of the drug. In the severer cases the urotropin proved of little benefit and silver salts were the main reliance.

64. New Blood Reagent.—Strzyzowski calls attention to the peculiarly fine crystals obtained with the following combination: 1 c.c. each of glacial acetic acid, water and alcohol, to which three drops of hydrogen iodid (Iodwasserstoffsäure) are added. The mixture must always be freshly made.

68. Time Required for Absorption of Fat Through the Rectum.—Baum describes the results of researches at von Mering's clinic at Halle in regard to the absorption of rectal alimentary injections. Iodipin is a combination of oil of sesamum and iodine. As it is taken up into the blood by absorption it is decomposed by oxidation and the iodine is liberated. Traces of iodine appear in the secretions, the saliva and urine, within a few minutes after ingestion of iodipin by the mouth. When it is administered by the rectum, the iodine does not appear in the secretions until fifteen hours afterward. Absorption by the rectum does not seem to be influenced by rest or exercise or by eating. Two factors alone seem to have a slight influence on it: the addition of 1.6 per cent. sodium chlorid to the emulsion, and reduction of the proportion of fluid. The rate of absorption varies somewhat in individuals, but is not affected by inflammatory processes in the lower intestines. It is possible that the fat is not absorbed below the ileum, and that there is no absorption in the large intestine. Rectal feeding with fats is of little use in cases of debility in which rapid assimilation is necessary.

69. Internal Gelatin Treatment of Hemophilia.—Hesse's case of a boy of 8 whose mother and grandmother had been anemic, but not bleeders, but the father of the latter had been a typical case of hemophilia and died at 38 from hemorrhage from the mouth, the lungs sound. The tendency had evidently been transmitted latent through two female generations as has been observed in other cases. The child was a very severe case of congenital hemophilia. After failure of all other measures, he was given 200 gm. of a 10 per cent. solution of gelatin every day for six months. The gelatin was flavored with fruit juices. The results have been surprisingly favorable, with disappearance of all symptoms.

70. Blue Electric Light in Therapeutics.—Daniloff reports from Minin's service in the military hospital at St. Petersburg, 12 cases of neuralgic or neuritic affections remarkably improved or cured by the application of blue electric light. The blue electric light expels the blood from the part exposed while the white light causes hyperemia. One case was a colonel who had suffered for nine years from rheumatic neuralgia in one shoulder, worse at night. The cure was complete after 9 applications of the blue electric light. It also aborted in twenty minutes attacks of asthma in 2 patients, the light in this case being merely blue light from an ordinary electric light with reflector. (Minin's apparatus was illustrated in *THE JOURNAL*, August 23, p. 432.)

71. Saline Infusion in Mental Diseases.—Saline infusion acts as a tonic, and at the same time stimulates and enhances the effect of other therapeutic measures. It has been found peculiarly beneficial in acute forms of mental diseases at Anton's clinic at Graz, in subcutaneous injection of from 350 to 400 c.c. of a physiologic salt solution or of Schücking's solution of .12 gm. sodium saccharate and 2.4 gm. sodium chlorid in 400 gm. distilled water. It is especially indicated in "exhaustion psychoses," and in those from intoxication or defective metabolism, in acute and collapse delirium, acute dementia, galloping progressive paralysis, amnesia, Korsakoff's psychosis, catatonia, dementia paranoides, the mental disturbances of puberty and the climacterium, and in incipient stages of melan-

cholia, especially the complicated forms. The back is the most convenient point for the injection in such cases.

73. Gonorrhea and Pregnancy.—Fürst announces that a systematic course of treatment with ichthargan will cure sterility and avert the tendency to abortion in gonorrheal women, while thoroughly curing the basal disease. Ichthargan is reliable, free from untoward effects, does not irritate even the endometrium and exerts its bactericidal power in the depths of the mucosa. It causes no disturbance even when used during the course of a pregnancy. Ichthargan (argent. thiohydrocarburosulfonicum) contains 30 per cent. silver. He applies it by rinsing the endometrium with a 5 per cent. solution and then inserts a 5 per cent. ichthargan bougie in the cervix and tampons the vagina with medicated gauze. Similar bougies are inserted in the urethra up to the opening into the bladder. This treatment is repeated every day for two or three weeks, by which time the cure was complete in his 9 cases of sterility or habitual abortion due to gonorrhea.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

A TEXT-BOOK OF PATHOLOGY AND PATHOLOGIC ANATOMY. By Dr. Hans Schmaus, Extraordinary Professor and First Assistant in the Pathological Institute, Munich. Translated from the Sixth German Edition, by Dr. A. E. Thayer, M.D., Instructor in Pathology in the Cornell University Medical College, New York. Edited, with Additions, by James Ewing, M.D., Professor of Pathology in the Cornell University Medical College, New York. Illustrated with 331 Engravings, including 35 Colored Inset Plates. Cloth. Pp. 602. Price, \$4.00. Philadelphia and New York: Lea Brothers & Co. 1902.

DIET AND FOOD, Considered in Relation to Strength and Power of Endurance, Training and Athletics. By Alexander Haig, M.A., M.D. Oxon., F.R.C.P., Physician to the Metropolitan Hospital, and the Royal Hospital for Children and Women. Fourth Edition. With 7 Illustrations. Cloth. Pp. 127. Price, \$1.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

A MANUAL OF SURGERY FOR STUDENTS AND PRACTITIONERS. By William Rose, M.B., B.S. Lond., F.R.C.S., Professor of Clinical Surgery in King's College, London, and Albert Carless, M.S. Lond., F.R.C.S., Surgeon to King's College Hospital. Fifth Edition. Cloth. Pp. 1213. Price, \$5.00 net. New York: Wm. Wood & Co. 1902.

DEATH AND SUDDEN DEATH. By P. Brouardel, Professor of Medical Jurisprudence, Dean of the Faculty of Medicine, Paris, and F. Lucas Benham, M.D., B.S. (Lond.), M.D. (Adeleide), Member of the Royal College of Physicians of London. Second Edition. Cloth. Pp. 336. Price, \$3.00. New York: Wm. Wood & Co. 1902.

MANUAL OF GYNECOLOGY. By Henry T. Byford, M.D., Professor of Gynecology and Clinical Gynecology in the College of Physicians and Surgeons of Chicago. Third Revised Edition. Containing 363 Illustrations, Many of Which Are Original. Cloth. Pp. 598. Price, \$3.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

TRANSACTIONS OF THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND. One Hundred and Fourth Annual Session, Held at Baltimore, April, 1902; Also Semi-Annual Session, Held at Elkton, Md., November, 1901. Paper. Pp. 101. Baltimore: The Deutsch Company.

ELECTRO-CHEMICAL ANALYSIS. By Edgar F. Smith, Professor of Chemistry, University of Pennsylvania. Third Edition, Revised and Enlarged. With 39 Illustrations. Cloth. Pp. 204. Price, \$1.50 net. Philadelphia: P. Blakiston's Son & Co. 1902.

The Public Service.

Army Changes.

Changes in station and duties of officers of the Medical Department, U. S. A., ordered from the Adjutant-General's Office, Washington, D. C., from October 18 to 24, inclusive:

Brooks, John D., contract surgeon, U. S. A., now at Ft. Meade, S. D., will report in person to the commanding officer of that post for duty.

Carter, W. Fitzhugh, major and surgeon, U. S. A. The leave of absence granted Major W. Fitzhugh Carter in Special Orders No. 211, Sept. 8, 1902, from this office, is extended two days.

DeLapre, Samuel M., first lieutenant and asst.-surgeon, U. S. A., recently appointed, now in this city, will report in person at 9 o'clock a. m., on Nov. 6, 1902, at the Army Medical Museum Building, to Colonel Calvin DeWitt, assistant surgeon-general, U. S. A., president of the faculty of the Army Medical School, for the course of instruction prescribed by Paragraphs 542 and 543, Army Regulations.

Fletcher, Richard M., contract surgeon, U. S. A., is relieved from duty at Ft. Meade, S. D., and will proceed to Ft. Niobrara, Neb., and report in person to the commanding officer of the latter post for duty, and by letter to the commanding general, Department of the Missouri.

Fraser, Simon J., major and surgeon, U. S. Vols., now at the Presidio of San Francisco, will proceed to Ft. Bayard, N. M., and re-

port in person to the commanding officer of the U. S. General Hospital at that post for treatment as a patient in that hospital.

Gorgas, William C., major and surgeon, U. S. A., is detailed to represent the Medical Department of the Army at the First Egyptian Medical Congress, to be convened at Cairo, Egypt, in December, 1902, and will proceed at the proper time to that place, via London, England. On the adjournment of the Congress, Major Gorgas will return via London, to this city.

By direction of the Secretary of War the following changes in the stations and duties of officers of the Medical Department are ordered:

Girard, Joseph B., colonel and assistant surgeon-general, U. S. A., on his arrival at San Francisco, will proceed to Omaha, Neb., and report in person to the commanding general, Department of Missouri, for duty as chief surgeon of that department.

Harvard, Valery, lieutenant-col. and deputy surgeon-general, U. S. A., is relieved from duty at Ft. Monroe, Va., and will proceed to West Point, N. Y., and report in person to the superintendent of the U. S. Military Academy for duty, to relieve Major James D. Glennan, surgeon, U. S. A.

Major Glennan, upon being thus relieved, will proceed to Ft. Myer, Va., and report in person to the commanding officer of that post for duty, and by letter to the commanding general, Department of the East, to relieve Major William B. Davis, surgeon, U. S. A.

Major Davis, on being thus relieved, will proceed to Honolulu, Hawaiian Islands, and report in person to the commanding officer of Camp McKinley for duty at that post and by letter to the commanding general, Department of California, to relieve First Lieutenant Edwin W. Rich, asst.-surgeon, U. S. A.

Lieutenant Rich, on being thus relieved, will proceed to San Francisco, and report by telegraph to the Adjutant-General of the Army for orders.

Johnson, Richard W., major and surgeon, U. S. A., is relieved from further duty as sanitary inspector, Department of California, and from duty in San Francisco, and will proceed to Ft. Monroe, Va., and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the East.

Wales, Philip G., captain and asst.-surgeon, is relieved from further duty as attending surgeon and examiner of recruits at Denver, Colo., and will proceed to Ft. Assiniboine, Montana, and report in person to the commanding officer of that post for temporary duty and by letter to the commanding general, Department of Dakota.

Overton, David W., contract surgeon, U. S. A., is relieved from duty at Plattsburgh Barracks, N. Y., and will proceed to Ft. Schuyler, N. Y., and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the East, to relieve First Lieutenant Theodore C. Lyster, asst.-surgeon, U. S. A.

Lieutenant Lyster, on being thus relieved, will proceed to New York City, for temporary duty as attending surgeon and examiner of recruits in that city, to relieve Captain James S. Wilson, asst.-surgeon, U. S. A.

Captain Wilson, on being thus relieved, will proceed to Ft. Myer, Va., and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the East.

Raymond, Thomas U., major and surgeon, U. S. A., is relieved from further duty as attending surgeon and examiner of recruits at Chicago, and will proceed to Jefferson Barracks, Missouri, and report in person to the commanding officer of that post for duty, and by letter to the commanding general, Department of the Missouri, to relieve Captain Francis A. Winter, asst.-surgeon, U. S. A.

Captain Winter, on being thus relieved, will proceed to St. Louis, Mo., and assume the duties of attending surgeon and examiner of recruits in that city.

Childester, Walter C., first lieutenant and asst.-surgeon, U. S. A., now at San Francisco, is relieved from further duty in the Division of the Philippines, and will report in person to the commanding general, Department of California, for assignment to temporary duty in that department.

Sturtevant, Charles A., contract surgeon, is relieved from further duty at Madison Barracks, N. Y., and will proceed to Ft. Totten, N. Y., and report in person to the commanding officer of that post for duty, to relieve First Lieutenant William N. Bispham, asst.-surgeon, U. S. A.

Lieutenant Bispham, on being thus relieved, will proceed to Ft. McHenry, Md., and report in person to the commanding officer of that post for duty.

Ford, Clyde S., first lieutenant and asst.-surgeon, U. S. A., is relieved from further duty at Ft. Hancock, N. J., and will proceed to Ft. Wadsworth, N. Y., and report in person to the commanding officer of the latter post for duty.

Usher, Francis M., first lieutenant and asst.-surgeon, U. S. A., is relieved from further duty at the U. S. General Hospital, San Francisco, and will proceed to Ft. Yellowstone, Wyo., and report in person to the commanding officer of that post for duty, relieving Major Edgar A. Mearns, surgeon, U. S. A.

Major Mearns, on being thus relieved, will proceed to Ft. Snelling, Minn., and report in person to the commanding officer of that post for duty.

Beatty, Walter K., contract surgeon, U. S. A., is relieved from further duty at the U. S. General Hospital, San Francisco, and will report to this city and report by letter to the Surgeon General for annulment of contract.

The leave of absence granted Captain Wm. B. Orear, asst.-surgeon, U. S. Vols., in Special Orders No. 209, Sept. 18, 1902, Department of California, is extended to include Nov. 18, 1902.

Poëy, Eduardo C., captain and asst.-surgeon, U. S. Vols., is honorably discharged by the Secretary of War from the service of the U. S., to take effect Nov. 25, 1902, his services being no longer required.

Robbins, Chandler P., first lieutenant and asst.-surgeon, U. S. A., is granted leave of absence for one month.

Show, Henry A., captain and asst.-surgeon, U. S. A., on arrival at San Francisco, will report to this city and report in person to the commanding officer of the U. S. General Hospital, Washington Barracks, for duty.

Stewart, Wm. J. S., captain and asst.-surgeon, U. S. Vols., now at San Francisco, is honorably discharged by the Secretary of War

from the service of the U. S., to take effect Oct. 22, 1902; his services being no longer required.

Clossman, August von, contract surgeon, U. S. A., is relieved from further duty at Jefferson Barracks, Missouri, and will proceed to his home, St. Louis, Mo., and on arrival report by letter to the Surgeon General of the Army for annulment of contract.

Wilcox, Charles, major and surgeon, U. S. A., is relieved from further duty in the Division of the Philippines and will proceed to San Francisco, and on arrival report by telegraph to the Adjutant-General of the Army for orders.

By direction of the Secretary of War the following-named asst.-surgeons, U. S. A., are relieved from duty at the posts designated after their respective names, to take effect at such times as will enable them to repair to this city and report in person at 9 o'clock a. m., Nov. 6, 1902, at the Army Medical Museum Building, to Col. Calvin DeWitt, assistant surgeon-general, U. S. A., president of the faculty of the Army Medical School, for the course of instruction prescribed by Paragraphs 542 and 543, Army Regulations, 1901.

Gilchrist, Harry L., first lieutenant, Vancouver Barracks, Washington.
Gosman, Geo. H. R., first lieutenant, Ft. Wadsworth, N. Y.
Kirby-Smith, Reynold M., first lieutenant, Ft. Barrancas, Fla.
Moncrief, Wm. H., first lieutenant, Ft. Getty, S. C.
Collins, Geo. L., first lieutenant, Ft. Warren, Mass.
Gapen, Nelson, first lieutenant, Ft. Myer, Va.
Davis, Wm. T., first lieutenant, Ft. McHenry, Md.
Morse, Chas. F., first lieutenant, Ft. Ethan Allen, Vt.
Lambert, Samuel E., first lieutenant, Washington Barracks, D. C.
Hansell, Hayward S., first lieutenant, Ft. McPherson, Ga.
Gregory, Junius C., first lieutenant, Ft. Myer, Va.
Connor, Clarence H., first lieutenant, U. S. General Hospital, Washington Barracks, D. C.

Pyles, Will L., first lieutenant, Plattsburgh Barracks, N. Y.
Devereux, Thomas, first lieutenant, Ft. Snelling, Minn.
Smart, Wm. M., first lieutenant, Ft. Monroe, Va.
Piereson, Robert H., first lieutenant, Ft. Columbus, N. Y.
Snoddy, Cary A., first lieutenant, Ft. Thomas, Ky.
Purnell, Harry S., first lieutenant, Columbus Barracks, Ohio.
Blanchard, Robert M., first lieutenant, Columbus Barracks, Ohio.
Bourke, James, first lieutenant, U. S. General Hospital, San Francisco.
By direction of the Secretary of War a board of medical officers, to consist of Major Louis Brechemin, surgeon, U. S. A.; Major Edward R. Morris, surgeon, U. S. A.; Major Alfred E. Bradley, surgeon, U. S. A.; Captain Henry R. Stiles, asst.-surgeon, U. S. A.; Captain Harry M. Hallock, asst.-surgeon, U. S. A., is appointed to meet in Manila, P. I., as soon as practicable, for the examination of candidates for admission to the Medical Corps of the Army.

Navy Changes.

Changes in the Medical Corps of the Navy, week of Oct. 25, 1902:
Surgeon E. H. Marsteller, ordered to Newark, N. J., October 27, for duty in connection with recruiting.

P. A. Surgeon W. L. Bell, commissioned passed assistant surgeon, with rank of lieutenant (junior grade), from Nov. 16, 1901.

P. A. Surgeon M. W. Garton, detached from the *Columbia* and ordered to the Naval Hospital, Yokohama, Japan, sailing from San Francisco, November 7.

P. A. Surgeon M. K. Johnson, ordered to the Naval Academy.
Asst.-Surgeon J. S. Taylor, detached from the Naval Hospital, Yokohama, Japan, and ordered home and to wait orders.

Asst.-Surgeon R. A. Bachmann, detached from the Naval Academy and ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C., October 31.

Asst.-Surgeon J. H. Holloway, detached from the Naval Hospital, Chelsea, Mass., and ordered to duty at the Museum of Hygiene and Medical School, Washington, D. C.

Asst.-Surgeon R. E. Hoyt, detached from the Naval Academy, and ordered to the Museum of Hygiene and Medical School, Washington, D. C., October 31.

Asst.-Surgeons R. H. Michels, J. L. Nelson, ordered to the Museum of Hygiene and Medical School, Washington, D. C., October 31.

A. A. Surgeons H. Shaw, B. F. Jenness, ordered to the Museum of Hygiene and Medical School, Washington, D. C., October 31.

Orders issued by Commander-in-Chief of Asiatic Station:

Surgeon J. E. Gardner, detached from the Naval Hospital, Yokohama, Japan, and ordered to the *Kentucky*.

Surgeon G. P. Lumsden, ordered to the *New York*.

P. A. Surgeon M. S. Elliott, detached from the *Kentucky* and ordered to the *New York*.

Asst.-Surgeon F. A. Asserson, detached from the *New York* and ordered to the *Kentucky*.

Asst.-Surgeon W. E. High, detached from the *Glacier* and ordered home.

Asst.-Surgeon J. F. Murphy, detached from the Naval Station, Cavite, P. I., and ordered home.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service, for the seven days ended Oct. 23, 1902:

Surgeon C. R. Banks, granted one day's extension of leave of absence, October 11.

P. A. Surgeon J. H. Onkley, granted leave of absence for one day.

P. A. Surgeon H. S. Mathewson, on being relieved by Asst.-Surgeon W. W. King, to proceed to Detroit, Mich., and report to medical officer in command for duty and assignment to quarters.

Asst.-Surgeon W. W. King, on being relieved by Asst.-Surgeon Jos. Goldberger, to proceed to San Juan, Porto Rico, relieving P. A. Surgeon H. S. Mathewson and assume the duties of chief quarantine officer of the Island of Porto Rico.

Asst.-Surgeon Joseph Goldberger, relieved from duty at Tampico, Mexico, and directed to proceed to Ponce, Porto Rico, relieving Asst.-Surgeon W. W. King and assume command of the service at that port.

A. A. Surgeon S. H. Backus, relieved from duty in the office of the U. S. Consul at Puerto Cortez, Honduras.

A. A. Surgeon W. H. Carson, relieved from duty in the office of the U. S. Consul at Port Limon, Costa Rica.

A. A. Surgeon John Frick, to proceed to Matanzas, Cuba, and assume temporary charge of the service at that port during the absence, on leave, of Asst.-Surgeon R. H. von Ezdorf.

A. A. Surgeon D. W. Goodman, relieved from duty in the office of the U. S. Consul at Bluefields, Nicaragua.

A. A. Surgeon Paul Osterhout, relieved from duty in the office of the U. S. Consul at Bocas del Toro, Colombia.

A. A. Surgeon R. H. Peters, relieved from duty in the office of the U. S. Consul at Belize, British Honduras.

A. A. Surgeon W. B. Robertson, relieved from duty in the office of the U. S. Consul at Celba, Honduras.

Senior Pharmacist and Chemist W. F. Macdowell, to report at Bureau for temporary duty.

BOARD CONVENED.

Board convened at Washington, D. C., October 23, for the physical examination of cadets recently appointed in the Revenue Cutter Service. Detail for the Board. Assistant Surgeon-General W. J. Pettus, chairman; Asst.-Surgeon B. S. Warren, recorder.

PROMOTION.

P. A. Surgeon J. B. Stoner promoted to be surgeon, and to rank as such from September 16.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Oct. 25, 1902:

SMALLPOX—UNITED STATES.

California: Sacramento, Oct. 11-18, 3 cases; San Francisco, Oct. 5-12, 6 cases.

Illinois: Oct. 11-18, Chicago, 3 cases; Freeport, 12 cases.

Indiana: South Bend, Oct. 11-18, 2 cases.

Kentucky: Covington, Oct. 4-18, 21 cases.

Massachusetts: Boston, Oct. 11-18, 6 cases, 3 deaths; Cambridge, Sept. 13-Oct. 4, 1 case, 1 death; Everett, Oct. 11-18, 1 case; Malden, Oct. 11-18, 2 cases.

Michigan: Detroit, Oct. 11-18, 13 cases.

Missouri: St. Louis, Oct. 12-19, 5 cases.

New Hampshire: Nashua, Oct. 11-18, 25 cases.

New Jersey: Newark, Oct. 4-18, 3 cases.

New York: New York, Oct. 11-18, 2 cases.

Ohio: Cincinnati, Oct. 10-17, 2 cases; Cleveland, Oct. 11-18, 34 cases, 5 deaths; Dayton, Oct. 11-18, 1 case; Hamilton, Oct. 11-18, 2 cases.

Pennsylvania: Altoona, Oct. 11-18, 1 case; Erie, Oct. 11-18, 2 cases; Johnstown, Oct. 11-18, 13 cases, 1 death; McKeesport, Oct. 11-18, 1 case; Philadelphia, Oct. 11-18, 2 cases; Pittsburg, Oct. 4-18, 37 cases, 5 deaths; Reading, Oct. 6-13, 2 cases.

South Dakota: Sioux Falls, Oct. 11-18, 1 case.

Utah: Salt Lake City, Sept. 27-Oct. 4, 2 cases.

Washington: Tacoma, Oct. 5-12, 1 case.

Wisconsin: Milwaukee, Oct. 11-18, 22 cases.

SMALLPOX—FOREIGN.

Brazil: Pernambuco, Aug. 15-31, 9 deaths; Rio de Janeiro, Sept. 21-28, 18 deaths.

Canada: Amherstburg, Oct. 11-18, 2 cases.

China: Hongkong, Sept. 6-13, 1 death.

Ecuador: Guayaquil, Sept. 27-Oct. 4, 2 deaths.

France: Marseilles, Sept. 1-30, 18 deaths.

Great Britain: Leeds, Oct. 4-11, 1 case; London, Sept. 27-Oct. 4, 4 cases.

India: Bombay, Sept. 16-23, 5 deaths; Calcutta, Sept. 13-20, 2 deaths.

Italy: Palermo, Sept. 20-27, 8 cases, 1 death.

Russia: Moscow, Sept. 20-27, 2 cases, 1 death; Odessa, Sept. 27-Oct. 4, 1 case.

YELLOW FEVER.

Brazil: Rio de Janeiro, Sept. 21-28, 6 deaths.

Colombia: Panama, Oct. 6-13, 8 cases.

Costa Rica: Port Limon, Oct. 2-9, 3 cases.

Ecuador: Guayaquil, Sept. 27-Oct. 4, 2 deaths.

Mexico: Coatzacoalcas, Oct. 4-11, 3 cases, 1 death; Vera Cruz, Oct. 11-18, 20 cases, 4 deaths.

CHOLERA—INSULAR.

Philippine Islands: To Sept. 13, Manila, 3,974 cases, 2,994 deaths; Provinces, 54,173 cases, 37,713 deaths.

CHOLERA—FOREIGN.

Arabic: Hodeidah, Sept. 10-12, 9 deaths.

China: Hongkong, Sept. 6-13, 1 case, 1 death.

Egypt: Sept. 6-20, 7,235 cases, 13,763 deaths; Alexandria, Sept. 13-20, 82 cases, 208 deaths; Cairo, Sept. 13-20, 28 cases, 102 deaths; Damietta, Sept. 13-20, 52 cases, 182 deaths; Ismailia, Sept. 13-20, 5 cases, 8 deaths; Port Said, Sept. 13-20, 2 cases, 8 deaths; Suez, Sept. 13-20, 31 cases, 41 deaths.

India: Calcutta, Sept. 13-20, 12 deaths; Madras, Aug. 23-Sept. 12, 1 death.

Japan: Fukuoka Ken, to Sept. 22, 1,042 cases, 646 deaths; Hiroshima Ken, to Sept. 22, 706 cases; Kagawa Ken, to Sept. 22, 2,344 cases; Nagasaki, Sept. 11-20, 52 cases, 34 deaths; Okayama Ken, Sept. 11-20, 2,140 cases, 1,455 deaths; Osaka, Sept. 20-27, 45 cases, 28 deaths.

PLAGUE—INSULAR.

Hawaii: Honolulu, Oct. 14, 1 case.

PLAGUE—FOREIGN.

Africa: To Aug. 9, Cape Peninsula, 745 cases, 362 deaths; Port Elizabeth, 135 cases, 66 deaths; Mossel Bay, 13 cases, 4 deaths; other places, 14 cases, 6 deaths.

Australia: New Castle, Aug. 1-31, 1 case, 1 death.

Brazil: Rio de Janeiro, Sept. 21-28, 11 deaths.

China: Hongkong, Sept. 6-13, 1 case, 1 death.

India: Bombay, Sept. 16-23, 55 deaths; Calcutta, Sept. 13-20, 8 deaths; Karachi, Sept. 14-21, 22 cases, 14 deaths; Madras, Aug. 23-Sept. 12, 1 death.

Russia: Odessa, from June to Oct. 4, 43 cases, 14 deaths.

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Address.

WILLIAM BEAUMONT.

A PIONEER AMERICAN PHYSIOLOGIST.*

WILLIAM OSLER, M.D.

PROFESSOR OF MEDICINE, JOHNS HOPKINS UNIVERSITY.
BALTIMORE.

Come with me for a few moments on a lovely June day in 1822, to what were then far-off northern wilds, to the Island of Michilimacinac, where the waters of Lake Michigan and Lake Huron unite and where stands Fort Mackinac, rich in the memories of Indian and voyageur, one of the four important posts on the upper lakes in the days when the rose and the fleur-de-llys strove for the mastery of the western world. Here the noble Marquette labored for his Lord, and here beneath the chapel of St. Ignace they laid his bones to rest. Here the intrepid LaSalle, the brave Tonty and the resolute Du Luht had halted in their wild wanderings. Its palisades and block-houses had echoed the war-whoops of Ojibwas and Ottawas, of Hurons and Iroquois, and the old fort had been the scene of bloody massacres and hard-fought fights, but at the conclusion of the War of 1812, after two centuries of struggle, peace settled at last on the island. The fort was occupied by United States troops, who kept the Indians in check and did general police duty on the frontier, and the place had become a rendezvous for Indians and voyageurs in the employ of the American Fur Company. On this bright spring morning the village presented an animated scene. The annual return tide to the trading post was in full course, and the beach was thronged with canoes and batteaux laden with the pelts of the winter's hunt. Voyageurs and Indians, men, women and children, with here and there a few soldiers, made up a motley crowd. Suddenly from the company's store there is a loud report of a gun, and amid the confusion and excitement the rumor spreads of an accident, and there is a hurrying of messengers to the barracks for a doctor. In a few minutes (Beaumont says twenty-five or thirty, an eye-witness says three) an alert-looking man in the uniform of a U. S. Army surgeon made his way through the crowd and was at the side of a young French Canadian who had been wounded by the discharge of a gun, and with a composure bred of an exceptional experience of such injuries, prepared to make the examination. Though youthful in appearance, Surgeon Beaumont had seen much service, and at the capture of York and at the investment of Plattsburgh he had shown a coolness and bravery under fire which had won high praise from his superior officers. The man and the opportunity had met—the outcome is my story of this evening.

I. THE OPPORTUNITY—ALEXIS ST. MARTIN.

On the morning of June 6 a young French Canadian, Alexis St. Martin, was standing in the company's store, "where one of the party was holding a shotgun (not a musket), which was accidentally discharged, the whole charge entering St. Martin's body. The muzzle was not over three feet from him—I think not more than two. The wadding entered, as well as pieces of his clothing; his shirt took fire; he fell, as we supposed, dead."

"Doctor Beaumont, the surgeon of the fort, was immediately sent for and reached the wounded man in a very short time, probably three minutes. We had just gotten him on a cot and were taking off some of his clothing. After the doctor had extracted part of the shot, together with pieces of clothing, and dressed his wound carefully, Robert Stuart and others assisting, he left him, remarking: 'The man can not live thirty-six hours; I will come and see him by and by.' In two or three hours he visited him again, expressing surprise at finding him doing better than he had anticipated. The next day, after getting out more shot and clothing and cutting off ragged edges of the wound, he informed Mr. Stuart, in my presence, that he thought he would recover."*

The description of the wound has been so often quoted as reported in Beaumont's work that I give here the interesting summary which I find in a "Memorial" presented to the Senate and House of Representatives by Beaumont. "The wound was received just under the left breast, and supposed, at the time, to have been mortal. A large portion of the side was blown off, the ribs fractured and openings made into the cavities of the chest and abdomen, through which protruded portions of the lungs and stomach, much lacerated and burnt, exhibiting altogether an appalling and hopeless case. The diaphragm was lacerated and a perforation made directly into the cavity of the stomach, through which food was escaping at the time your memorialist was called to his relief. His life was at first wholly despaired of, but he very unexpectedly survived the immediate effects of the wound, and necessarily continued a long time under the constant professional care and treatment of your memorialist, and, by the blessing of God, finally recovered his health and strength.

"At the end of about ten months the wound was partially healed, but he was still an object altogether miserable and helpless. In this situation he was declared 'a common pauper' by the civil authorities of the county, and it was resolved by them that they were not able, nor required, to provide for or support, and finally declined

* Statement of G. G. Hubbard, an officer of the company, who was present when St. Martin was shot, quoted by Dr. J. R. Bally, of Mackinac Island, in his address on the occasion of the Beaumont Memorial Exercises, Mackinac Island, July 10, 1900. The Physician and Surgeon, December, 1900.

* An Address before the St. Louis Medical Society, Oct. 4, 1902.

taking care of him, and, in pursuance of what they probably believed to be their public duty, authorized by the laws of the territory, were about to transport him, in this condition, to the place of his nativity in lower Canada, a distance of more than fifteen hundred miles.

"Believing the life of St. Martin must inevitably be sacrificed if such attempt to remove him should be carried into execution at that time, your memorialist, after earnest, repeated, but unavailing, remonstrances against such a course of proceedings, resolved, as the only way to rescue St. Martin from impending misery and death, to arrest the process or transportation and prevent the consequent suffering, by taking him into his own private family, where all the care and attention were bestowed that his condition required.

"St. Martin was, at this time, as before intimated, altogether helpless and suffering under the debilitating effects of his wounds—naked and destitute of everything. In this situation your memorialist received, kept, nursed, medically and surgically treated and sustained him, at much inconvenience and expense, for nearly two years, dressing his wounds daily, and for considerable part of the time twice a day, nursed him, fed him, clothed him, lodged him and furnished him with such necessities and comforts as his condition and suffering required.

"At the end of these two years he had become able to walk and help himself a little, though unable to provide for his own necessities. In this situation your memorialist retained St. Martin in his family for the special purpose of making physiological experiments."

In the month of May, 1825, Beaumont began the experiments. In June he was ordered to Fort Niagara, where, taking the man with him, he continued the experiments until August. He then took him to Burlington and to Plattsburgh. From the latter place St. Martin returned to Canada, without obtaining Dr. Beaumont's consent. He remained in Canada four years, worked as a voyageur, married and had two children. In 1829 Beaumont succeeded in getting track of St. Martin, and the American Fur Company engaged him and transported him to Fort Crawford on the upper Mississippi. The side and wound were in the same condition as in 1825. Experiments were continued uninterruptedly until March, 1831, when circumstances made it expedient that he should return with his family to lower Canada. The "circumstances," as we gather from letters, were the discontent and homesickness of his wife. As illustrating the mode of travel, Beaumont states that St. Martin took his family in an open canoe "via the Mississippi, passing by St. Louis, ascended the Ohio river, then crossed the state of Ohio to the lakes, and descended the Erie and Ontario and the river St. Lawrence to Montreal, where they arrived in June." Dr. Beaumont often lays stress on the physical vigor of St. Martin as showing how completely he had recovered from the wound. In November, 1832, he again engaged himself to submit to another series of experiments in Plattsburgh and Washington. The last recorded experiment is in November, 1833.

Among the Beaumont papers, for an examination of which I am much indebted to his daughter, Mrs. Kein (Appendix A), there is a large mass of correspondence relating to St. Martin, extending from 1827, two years after he had left the doctor's employ, to October, 1852. Alexis was in Dr. Beaumont's employ in the periods already specified. In 1833 he was enrolled in the United States Army at Washington as Sergeant Alexis St. Martin, of a detachment of orderlies stationed at the

War Department. He was then 28 years of age, and was five feet five inches in height.

Among the papers there are two articles of agreement, both signed by the contracting parties, one dated Oct. 19, 1833, and the other November 7 of the same year. In the former he bound himself for a term of one year to "serve, abide and continue with the said William Beaumont, wherever he shall go or travel or reside in any part of the world his covenant servant and diligently and faithfully, etc., . . . that he, the said Alexis, will at all times during said term when thereto directed or required by said William, submit to assist and promote by all means in his power such philosophical or medical experiments as the said William shall direct or cause to be made on or in the stomach of him, the said Alexis, either through and by means of the aperture or opening thereto in the side of him, the said Alexis, or otherwise, and will obey, suffer and comply with all reasonable and proper orders of or experiments of the said William in relation thereto and in relation to the exhibiting and showing of his said stomach and the powers and properties thereto and of the appurtenances and the powers, properties and situation and state of the contents thereof." The agreement was that he should be paid his board and lodging and \$150 for the year. In the other agreement it is for two years and the remuneration \$400. He was paid a certain amount of the money down.

There are some letters from Alexis himself, all written for him and signed with his mark. In June, 1834, he writes that his wife was not willing to let him go and thinks that he can do a great deal better to stay at home. From this time on Alexis was never again in Dr. Beaumont's employ.

There is a most interesting and protracted correspondence in the years 1836, 1837, 1838, 1839, 1840, 1842, 1846, 1851 and 1852, all relating to attempts to induce Alexis to come to St. Louis. For the greater part of this time he was in Berthier, in the district of Montreal, and the correspondence was chiefly conducted with a Mr. William Morrison, who had been in the northwest fur trade and who took the greatest interest in Alexis and tried to induce him to go to St. Louis. (See Appendix B.)

In 1846 Beaumont sent his son Israel for Alexis. and in a letter dated Aug. 9, 1846, his son writes from Troy: "I have just returned from Montreal, but without Alexis. Upon arriving at Berthier I found that he owned and lived on a farm about fifteen miles southwest of the village." Nothing would induce him to go.

The correspondence with Mr. Morrison in 1851 and 1852 is most voluminous, and Dr. Beaumont offered Alexis \$500 for the year, with comfortable support for his family. He agreed at one time to go, but it was too late in the winter and he could not get away.

The last letter of the series is dated Oct. 15, 1852, and is from Dr. Beaumont to Alexis, whom he addresses as *Mon Ami*. Two sentences in this are worth quoting: "Without reference to past efforts and disappointments—or expectation of ever obtaining your services again for the purpose of experiments, etc., upon the proposals and conditions heretofore made and suggested, I now proffer to you in faith and sincerity, new, and I hope satisfactory, terms and conditions to ensure your prompt and faithful compliance with my most fervent desire to have you again with me—not only for my own individual gratification, and the benefits of medical science, but also for your own and family's present good and

future welfare." He concludes with, "I can say no more, Alexis—you know what I *have* done for you many years since—what I have been *trying*, and am still anxious and wishing to do with and for you—what efforts, anxieties, anticipations and disappointments I have suffered from your non-fulfilment of my expectations. Don't disappoint me more nor forfeit the bounties and blessings reserved for you."

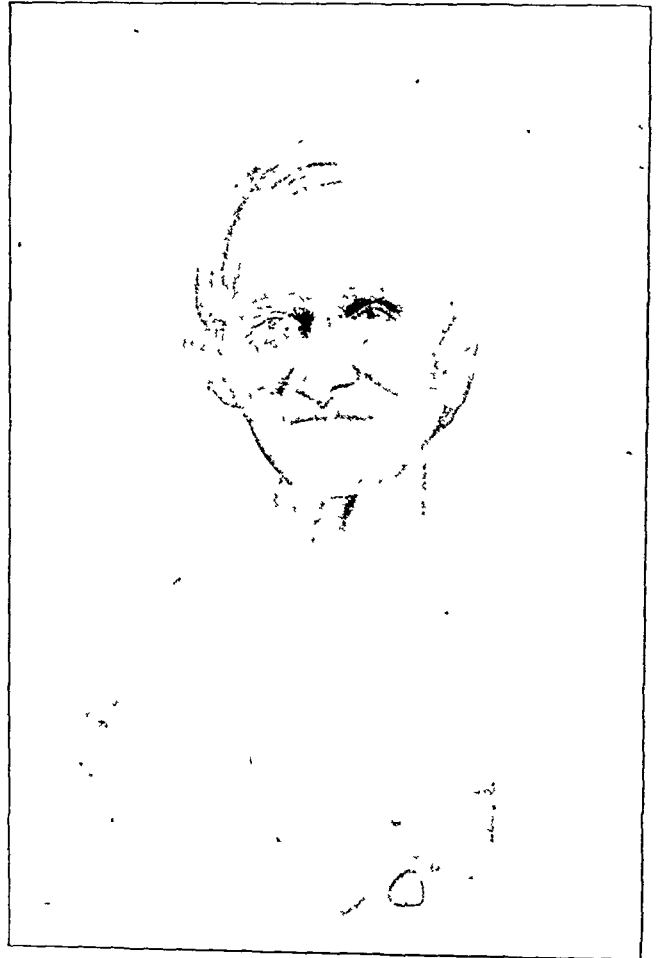
So much interest was excited by the report of the experiments that it was suggested to Beaumont that he should take Alexis to Europe and submit him there to a more extended series of observations by skilled physiologists. Writing June 10, 1833, he says: "I shall engage him for five or six years if he will agree, of which I expect there is no doubt. He has always been pleased with the idea of going to France. I feel much gratified at the expression of Mr. Livingston's desire that we should visit Paris, and shall duly consider the interest he takes in the subject and make the best arrangements I can to meet his views and yours." Mr. Livingston, the American minister, wrote from Paris March 18, 1834, saying that he had submitted the work to Orfila and the Academy of Sciences, which had appointed a committee to determine if additional experiments were necessary and whether it was advisable to send to America for Alexis. Nothing, I believe, ever came of this, nor, so far as I can find, did Alexis visit Paris. Other attempts were made to secure him for purposes of study. In 1840 a student of Dr. Beaumont's, George Johnson, then at the University of Pennsylvania, wrote saying that Dr. Jackson had told him of efforts made to get Alexis to London, and Dr. Gibson informed him that the Medical Society of London had raised £300 or £400 to induce St. Martin to come, and that he, Dr. Gibson, had been trying to find St. Martin for his London friends. There are letters in the same year from Dr. R. D. Thomson of London to Professor Silliman urging him to arrange that Dr. Beaumont and Alexis should visit London. In 1856 St. Martin was under the observation of Dr. Francis Gurney Smith, in Philadelphia, who reported a brief series of experiments, so far as I know the only other report made on him.*

St. Martin had to stand a good deal of chaffing about the hole in his side. His comrades called him "the man with a lid on his stomach." In his memorial address Mr. C. S. Osborn of Sault Ste. Marie states that Miss Catherwood tells a story of Etienne St. Martin fighting with Charlie Charette because Charlie ridiculed his brother. Etienne stabbed him severely and swore that he would kill the whole brigade if they did not stop deriding his brother's stomach.

At one time St. Martin traveled about exhibiting the wound to physicians, medical students and before medical societies. In a copy of Beaumont's work, formerly belonging to Austin Flint, Jr., and now in the possession of a physician of St. Louis, there is a photograph of Alexis sent to Dr. Flint. There are statements made that he went to Europe, but of such a visit I can find no record.

My interest in St. Martin was of quite the general character of a teacher of physiology, who every session referred to his remarkable wound and showed Beaumont's book with the illustration. In the spring of 1880, while still a resident of Montreal. I saw a notice in the newspapers of his death at St. Thomas. I immediately wrote to a physician and to the parish priest, urging them to secure me the privilege of an autopsy

and offering to pay a fair sum for the stomach, which I agreed to place in the Army Medical Museum in Washington, but without avail. Subsequently, through the kindness of the Hon. Mr. Justice Baby, I obtained the following details of St. Martin's later life, and the picture here given, which was taken the year before his death so as to show the wound, which I here show you. Judge Baby writes to his friend, Prof. D. C. MacCallum of Montreal, as follows: "I have much pleasure to-day in placing in your hands such information about St. Martin as Revd. Mr. Chicoine, Curé of St. Thomas, has just handed over to me. Alexis Bidigan, *dit* St. Martin, died at St. Thomas de Joliette on the 24th of June, 1880, and was buried in the cemetery of the parish on the 28th of the same month. The last sacraments of the



ALEXIS ST. MARTIN, AGED 81.

Catholic church were ministered to him by the Revd. Curé Chicoine, who also attended at his burial service. The body was then in such an advanced stage of decomposition that it could not be admitted into the church, but had to be left outside during the funeral service. The family resisted all requests—most pressing as they were—on the part of the members of the medical profession for an autopsy, and also kept the body at home much longer than usual and during a hot spell of weather, so as to allow decomposition to set in and baffle, as they thought, the doctors of the surrounding country and others. They had also the grave dug eight feet below the surface of the ground in order to prevent any attempt at a resurrection. When he died St. Martin was 83 years of age, and left a widow, whose maiden name was Marie Joly. She survived him by

* Medical Examiner, 1856, and Experiments on Digestion, Phila., 1856

nearly seven years, dying at St. Thomas on the 20th of April, 1887, at the very old age of 90 years. They left four children still alive—Alexis, Charles, Henriette and Marie.

"Now I may add the following details for myself. When I came to know St. Martin it must have been a few years before his death. A law suit brought him to my office here in Joliette. I was seized with his interests; he came to my office a good many times, during which visits he spoke to me at great length of his former life, how his wound had been caused, his peregrinations through Europe and the United States, etc. He showed me his wound. He complained bitterly of some doctors who had awfully misused him, and had kind words for others. He had made considerable money during his tours, but had expended and thrown it all away in a frolicsome way, especially in the old country. When I came across him he was rather poor, living on a small, scanty farm in St. Thomas, and very much addicted to drink, almost a drunkard one might say. He was a tall, lean man, with a very dark complexion, and appeared to me then of a morose disposition."

II. THE BOOK.

In the four periods in which Alexis had been under the care and study of Beaumont a large series of observations had been recorded, amounting in all to 238. A preliminary account of the case and of the first group of observations appeared in the *Philadelphia Medical Recorder* in January, 1825. During the stay in Washington in 1832 the great importance of the observations had become impressed on the Surgeon-General, Dr. Lovell, who seems to have acted in a most generous and kindly spirit. Beaumont tried to induce him to undertake the arrangement of the observations, but Lovell insisted that he should do the work himself. In the spring of 1833 Alexis was taken to New York and there shown to the prominent members of the profession, and careful drawings and colored sketches were made of the wound by Mr. King. A prospectus of the work was issued and was distributed by the Surgeon-General, who speaks in a letter of sending them to Dr. Franklin Bache and to Dr. Stewart of Philadelphia, and in a letter from Dr. Bache to Dr. Beaumont acknowledging the receipt of a bottle of gastric juice, Bache states that he has placed the prospectus in Mr. Judah Dobson's store and has asked for subscribers. Beaumont did not find New York a very congenial place. He complained of the difficulty of doing the work owing to the vexatious social intercourse. He applied for permission to go to Plattsburgh, in order to complete the book. After having made inquiries in New York and Philadelphia about terms of publication he decided, as the work had to be issued at his own expense, that it could be as well and much more cheaply printed at Plattsburgh, where he would also have the advice and help of his cousin, Dr. Samuel Beaumont. In a letter to the Surgeon-General, dated June 10, 1833, he acknowledges the permission to go to Plattsburgh, and says: "I shall make my arrangements to leave here for Pl. in about a week to *rush* the execution of the Book as fast as possible. I am now having the drawings taken by Mr. King engraved here."

The summer was occupied in making a fresh series of experiments and getting the work in type. On December 3 he writes the Surgeon-General that the book will be ready for distribution in a few days and that 1,000 copies will be printed.

The work is an octavo volume of 280 pages, entitled "Experiments and Observations on the Gastric Juice and the Physiology of Digestion," by William Beau-

mont, M.D., Surgeon in the United States Army. Plattsburgh. Printed by F. P. Allen, 1833. While it is well and carefully printed, the paper and type are not of the best, and one can not but regret that Beaumont did not take the advice of Dr. Franklin Bache, who urged him strongly not to have the work printed at Plattsburgh, but in Philadelphia, where it could be done in very much better style. The dedication of the work to Joseph Lovell, M.D., Surgeon-General of the United States Army, acknowledges in somewhat laudatory terms the debt which Beaumont felt he owed to his chief, who very gratefully acknowledges the compliment and the kindly feeling, but characterizes the dedication as "somewhat apocryphal."

The work is divided into two main portions; first, the preliminary observations on the general physiology of digestion in seven sections: Section I, Of Aliment; Section II, Of Hunger and Thirst; Section III, of Satisfaction and Satiety; Section IV, Of Mastication, Insalivation and Deglutition; Section V, Of Digestion by the Gastric Juice; Section VI, Of the Appearance of the Villous Coat, and of the Motions of the Stomach; Section VII, Of Chylification and Uses of the Bile and Pancreatic Juice. The greater part of the book is occupied by the larger section of the detailed account of the four series of experiments and observations. The work concludes with a series of 51 inferences from the foregoing experiments and observations.

The subsequent history of the book itself is of interest, and may be dealt with here. In 1834 copies of the Plattsburgh edition, printed by F. P. Allen, were issued by Lilly, Wait & Co., of Boston.

In the Beaumont correspondence there are many letters from a Dr. McCall, in Utica, N. Y., who was an intimate friend of a Mr. Wm. Combe, a brother of the well-known physiologist and popular writer, Dr. Andrew Combe of Edinburgh. Doubtless it was through this connection that in 1838 Dr. Combe issued an edition in Scotland, with numerous notes and comments. (Appendix C.)

The second edition was issued from Burlington, Vt., in 1847, with the same title page, but after Second Edition there are the words, Corrected by Samuel Beaumont, M.D., who was Dr. William Beaumont's cousin. In the preface to this edition the statement is made that the first edition, though a large one of 3,000 copies, had been exhausted. This does not agree with the statement made in a letter of Dec. 3, 1833, to the Surgeon-General, stating that the edition was to be 1,000 copies. Of course more may have been printed before the type was distributed. While it is stated to be a new and improved edition, so far as I can gather it is a verbatim reprint, with no additional observations, but with a good many minor corrections. In an appendix (D) I give an interesting letter from Dr. Samuel Beaumont with reference to the issue of this edition.

A German edition was issued in 1834 with the following title: "Neue Versuche und Beobachtungen ueber den Magensaft und die Physiologie der Verdauung, auf eine höchst merkwürdige Weise während einer Reihe von 7 Jahren, an einen und demselben Subject angestellt." Beaumont's earlier paper, already referred to, was abstracted in the *Magazin der ausländischen Litteratur der gesammten Heilkunde*, Hamburg. 1826, and also in the *Archives generales de Medecine*, Paris, 1828. I can not find that there was a French edition of the work.

The "Experiments and Observations" attracted universal attention, both at home and abroad. The jour-

nals of the period contained very full accounts of the work, and within a few years the valuable additions to our knowledge filtered into the text-books of physiology, which to-day in certain descriptions of the gastric juice and of the phenomena of digestion even the very language of the work is copied.

III. THE VALUE OF BEAUMONT'S OBSERVATIONS.

There had been other instances of artificial gastric fistula in man which had been made the subject of experimental study, but the case of St. Martin stands out from all others on account of the ability and care with which the experiments were conducted. As Dr. Combe says, the value of these experiments consists partly in the admirable opportunities for observation which Beaumont enjoyed, and partly in the candid and truth-seeking spirit in which all his inquiries seem to have been conducted. "It would be difficult to point out any observer who excels him in devotion to truth and freedom from the trammels of theory or prejudice. He tells plainly what he saw and leaves every one to draw his own inferences, or where he lays down conclusions he does so with a degree of modesty and fairness of which few perhaps in his circumstances would have been capable."

To appreciate the value of Beaumont's studies it is necessary to refer for a few moments to our knowledge of the physiology of digestion in the year 1832, the date of the publication. Take, for example, "The Work on Human Physiology" (published in the very year of the appearance of Beaumont's book), by Dunglison, a man of wide learning and thoroughly informed in the literature of the subject. The five or six old theories of stomach digestion, concoction, putrefaction, trituration, fermentation and maceration, are all discussed, and Wm. Hunter's pithy remark is quoted, "some physiologists will have it, that the stomach is a mill, others, that it is a fermenting vat, others, again, that it is a stew-pan; but, in my view of the matter, it is neither a mill, a fermenting vat nor a stew-pan; but a stomach, gentlemen, a stomach."

The theory of chemical solution is accepted. This had been placed on a sound basis by the experiments of Reaumur, Spallanzani and Stevens, while the studies of Tiedemann and Gmelin and of Prout had done much to solve the problems of the chemistry of the juice. But very much uncertainty existed as to the phenomena occurring during digestion in the stomach, the precise mode of action of the juice, the nature of the juice itself and its action outside the body. On all these points the observations of Beaumont brought clearness and light where there had been previously the greatest obscurity.

The following may be regarded as the most important of the results of Beaumont's observations: First, the accuracy and completeness of description of the gastric juice itself. You will all recognize the following quotation, which has entered into the text-books and passes current to-day. "Pure gastric juice, when taken directly out of the stomach of a healthy adult, unmixed with any other fluid, save a portion of the mucus of the stomach with which it is most commonly and perhaps always combined, is a clear, transparent fluid; inodorous; a little saltish, and very perceptibly acid. Its taste, when applied to the tongue, is similar to this mucilaginous water slightly acidulated with muriatic acid. It is readily diffusible in water, wine or spirits; slightly effervesces with alkalies; and is an effectual solvent of the *materia alimentaria*. It possesses the property of coagulating albumen, in an eminent degree; is powerfully antiseptic, checking the putrefaction

of meat; and effectually restorative of healthy action, when applied to old, foetid sores and foul, ulcerating surfaces."

Secondly, the confirmation of the observation of Prout that the important acid of the gastric juice was the muriatic or hydrochloric. An analysis of St. Martin's gastric juice were made by Dunglison, at that time a professor in the University of Virginia, and by Benjamin Silliman of Yale, both of whom determined the presence of free hydrochloric acid. A specimen was sent to the distinguished Swedish chemist, Berzelius, whose report did not arrive in time to be included in the work. In a letter dated July 19, 1834, he writes to Professor Silliman that he had not been able to make a satisfactory analysis of the juice. The letter is published in *Silliman's Journal*, Vol. 27, July, 1835.

Thirdly, the recognition of the fact that the essential elements of the gastric juice and the mucus were separate secretions.

Fourthly, the establishment by direct observation of the profound influence on the secretion of the gastric juice and on digestion of mental disturbances.

Fifthly, a more accurate and fuller comparative study of the digestion in the stomach with digestion outside the body, confirming in a most elaborate series of experiments the older observations of Spallanzani and Stevens.

Sixthly, the refutation of many erroneous opinions relating to gastric digestion and the establishment of a number of minor points of great importance, such as, for instance, the rapid disappearance of water from the stomach through the pylorus, a point brought out by recent experiments, but insisted on and amply proven by Beaumont.

Seventhly, the first comprehensive and thorough study of the motions of the stomach, observations on which, indeed, are based the most of our present knowledge.

And lastly, a study of the digestibility of different articles of diet in the stomach, which remains to-day one of the most important contributions ever made to practical dietetics.

The greater rapidity with which solid food is digested, the injurious effects on the stomach of tea and coffee, when taken in excess, the pernicious influence of alcoholic drinks on the digestion, are constantly referred to. An all-important practical point insisted on by Beaumont needs emphatic reiteration to this generation: "The system requires much less than is generally supplied to it. The stomach disposes of a definite quantity. If more be taken than the actual wants of the economy require, the residue remains in the stomach and becomes a source of irritation and produces a consequent aberration of function, or passes into the lower bowel in an undigested state, and extends to them its deleterious influence. Dyspepsia is oftener the effect of over-eating and over-drinking than of any other cause."

One is much impressed, too, in going over the experiments, to note with what modesty Beaumont refers to his own work. He speaks of himself as a humble "enquirer after truth and a simple experimenter." "Honest objection, no doubt, are entertained against the doctrine of digestion by the gastric juice. That they are so entertained by these gentlemen I have no doubt. And I cheerfully concede to them the merit of great ingenuity, talents and learning, in raising objections to the commonly received hypothesis, as well as ability in maintaining their peculiar opinions. But we ought

not to allow ourselves to be seduced by the ingenuity of argument or the blandishments of style. Truth, like beauty, when 'unadorned is adorned the most'; and in prosecuting these experiments and inquiries, I believe I have been guided by its light. Facts are more persuasive than arguments, however ingeniously made, and by their eloquence I hope I have been able to plead for the support and maintenance of those doctrines which have had for their advocates such men as Sydenham, Hunter, Spallanzani, Richerand, Abernethy, Broussais, Philip, Paris, Bostock, the Heidelberg and Paris professors, Dunglison, and a host of other luminaries in the science of physiology."

In reality Beaumont anticipated some of the most recent studies in the physiology of digestion. Doubtless many of you have heard of Professor Pawlow's, of St. Petersburg, new work on the subject. It has been translated into German, and I see that an English edition is advertised. He has studied the gastric juice in an isolated pouch, ingeniously made at the fundus of the stomach of the dog, from which the juice could be obtained in a pure state. One of his results is the very first announced by Beaumont and confirmed by scores of observations on St. Martin, viz., that, as he says, "the gastric juice never appears to be accumulated in the cavity of the stomach while fasting." Pawlow has shown very clearly that there is a relation between the amount of food taken and the quantity of gastric juice secreted. Beaumont came to the same conclusion: "when aliment is received the juice is given in exact proportion to its requirements for solution." A third point on which Pawlow lays stress is the curve of secretion of the gastric juice, the manner in which it is poured out during digestion. The greatest secretion, he has shown, takes place in the earlier hours. On this point hear Beaumont: "It (the gastric juice) then begins to exude from the proper vessels and increases in proportion to the quantity of aliment naturally required and received." And again: "When a due and moderate supply of food has been received it is probable that the whole quantity of gastric juice for its complete solution is secreted and mixed with it in a short time." A fourth point, worked out beautifully by Pawlow, is the adaptation of the juice to the nature of the food, on which I do not see any reference by Beaumont, but there are no experiments more full than those in which he deals with the influence of exercise, weather and the emotions on the quantity of the juice secreted.

IV. MAN AND DOCTOR.

Sketches of Dr. Beaumont's life have appeared from time to time. There is a worthy memoir by Dr. T. Reyburn in the *St. Louis Medical and Surgical Journal*, 1854, and Dr. A. J. Steele, at the first annual commencement of the Beaumont Medical College, 1887, told well and graphically the story of his life. A few years ago Dr. Frank J. Lutz, of this city, sketched his life for the memorial meeting of the Michigan State Medical Society on the occasion of the dedication of a Beaumont monument.

Among the papers kindly sent to me by his daughter, Mrs. Keim, are many autobiographical materials, particularly relating to his early studies and to his work as a surgeon in the War of 1812. There is an excellent paper in the handwriting, it is said, of his son, giving a summary of the earlier period of his life. So far as I know this has not been published, and I give it in full:

Dr. William Beaumont was born in the town of Lebanon, Conn., on the 21st day of November, A. D. 1785. His father

was a thriving farmer and an active politician of the proud old Jeffersonian school, whose highest boast was his firm support and strict adherence to the honest principles he advocated. William was his third son, who, in the winter of 1806-7, in the 22d year of his age, prompted by a spirit of independence and adventure, left the paternal roof to seek a fortune and a name. His outfit consisted of a horse and cutter, a barrel of cider, and one hundred dollars of hard-earned money. With this he started, laying his course northwardly, without any particular destination, Honor his rule of action, Truth his only landmark, and trust placed implicitly in Heaven. Traversing the western part of Massachusetts and Vermont in the spring of 1807 he arrived at the little village of Champlain, N. Y., on the Canada frontier—an utter stranger, friendless and alone. But honesty of purpose and true energy invariably work good results. He soon gained the people's confidence and was entrusted with their village school, which he conducted about three years, devoting his leisure hours to the study of medical works from the library of Dr. Seth Pomeroy, his first patron. He then went over to St. Albans, Vt., where he entered the office of Dr. Benjamin Chandler and commenced a regular course of medical reading, which he followed for two years, gaining the utmost



WILLIAM BEAUMONT.

confidence and esteem of his kind preceptor and friends. About this time the War of 1812 commenced, and he applied for an appointment in the U. S. Army, successfully. He was appointed assistant-surgeon to the Sixth Infantry, and joined his regiment at Plattsburgh, N. Y., on the 13th of September, 1812. On the 19th of March, 1813, he marched from Plattsburgh with the First Brigade, for Sackett's Harbor, where they arrived on the 27th inst. Here he remained in camp till the 22d of April, when he embarked with the troops on Lake Ontario. His journal will best tell this portion of his history:

"April 22, 1813.—Embarked with Captain Humphreys, Walworth and Muhlenburg, and companies on board the Schooner 'Julia.' The rest of the brigade, and the Second, with Forsyth's Rifle Regiment and the Eighth Artillery, on board a ship, brig and schooner—remain in the harbor till next morning.

"23d.—11 o'clock a. m.—Weighs anchor and put out under the impression we were going to Kingston. Got out 15 or 20 miles—encountered a storm—wind ahead and the fleet returned to harbor.

"24th.—6 o'clock a. m.—Put out with a fair wind—mild and pleasant—the fleet sailing in fine order.

"26th.—Wind pretty strong—increasing—waves run high, tossing our vessels roughly. At half past four pass the mouth of Niagara river. This circumstance baffles imagination as to

where we are going—first impressed with the idea of Kingston—then to Niagara—but now our destination must be 'Little York.' At sunset came in view of York Town and the Fort, where we lay off some 3 or 4 leagues for the night.

"27th.—Sailed into harbor and came to anchor a little below the British Garrison. Filled the boats and effected a landing, though not without difficulty and the loss of some men. The British marched their troops down the beach to cut us off as landing, and, though they had every advantage, they could not effect their design. A hot engagement ensued, in which the enemy lost nearly a third of their men and were soon compelled to quit the field, leaving their dead and wounded strewn in every direction. They retired to the Garrison, but from the loss sustained in the engagement, the undaunted courage of our men, and the brisk firing from our fleet, with the 12 and 32 pounders, they were soon obliged to evacuate it and retreat with all possible speed.—Driven to this alternative they devised the inhuman project of blowing up their magazine, containing 300 pounds of powder, the explosion of which had well-nigh destroyed our army. Over 300 were wounded and about 60 killed on the spot, by stones of all dimensions falling, like a shower of hail, in the midst of our ranks. A most distressing scene ensues in the hospital. Nothing is heard but the agonizing groans and supplications of the wounded and the dying. The surgeons wade in blood cutting off arms and legs and trepaning heads, while the poor sufferers cry, 'O, my God! Doctor, relieve me from this misery! I can not live!' 'Twas enough to touch the veriest heart of steel and move the most relentless savage. Imagine the shocking scene, where fellow-beings lie mashed and mangled—legs and arms broken and sundered—heads and bodies bruised and mutilated to disfigurement! My deepest sympathies were roused—I cut and slashed for 36 hours without food or sleep.

"29th.—Dressed upwards of 50 patients—from simple contusions to the worst of compound fractures—more than half the latter. Performed two cases of amputation and one of trepanning. At 12 p. m. retired to rest my fatigued body and mind."

One month after the taking of York he witnessed the storming of Fort George. The troops were transported from York to "Four-Mile Creek" (in the vicinity of Ft. George), where they encamped from the 10th of May to the 27th, when they advanced to the attack. His journal runs thus:

"May 27 (1813).—Embarked at break of day—Col. Scott with 800 men, for the advanced guard, supported by the First Brigade, commanded by General Boyd, moved in concert with the shipping to the enemy's shore and landed under their battery and in front of their fire with surprising success, not losing more than 30 men in the engagement, though the enemy's whole force was placed in the most advantageous situation possible. We routed them from their chosen spot—drove them from the country and took possession of the town and garrison."

On the 11th of September, 1814, he was at the Battle of Plattsburgh, still serving as assistant-surgeon, though doing all the duty of a full surgeon. At the close of the war, in 1815, when the Army was cut down, he was retained in service, but resigned soon after, deeming himself unjustly treated by the government in having others, younger and less experienced, promoted over him.

In 1816 he settled in Plattsburgh and remained there four years in successful practice. In the meantime his army friends had persuaded him to join the service again, and, having applied, he was reappointed, in 1820, and ordered to Ft. Mackinac as post surgeon. At the end of the first year he obtained leave of absence, returned to Plattsburgh and married one of the most amiable and interesting ladies of that place. (She still survives her honored husband, and in her green old age is loved devotedly by all who know her.) He returned to Mackinac the same year, and in 1822 came in possession of Alexis St. Martin, the subject of his "Experiments on the Gastric Juice." By the accidental discharge of his gun, while hunting, St. Martin had dangerously wounded himself in the abdomen and came under the treatment of Dr. Beaumont, who healed the wound (in itself a triumph of skill almost unequalled) and in 1825 commenced a series of experiments, the results of which have a world-wide publication. These experi-

ments were continued, with various interruptions, for eight years, during which time he was ordered from post to post—now at Niagara, N. Y., anon as Green Bay, Mich., and finally at Fort Crawford, on the Mississippi. In 1834 he was ordered to St. Louis, where he remained in service till 1839, when he resigned. He then commenced service with the citizens of St. Louis, and from that time till the period of his last illness, enjoyed an extensive and distinguished practice, interrupted only by the base attacks of a few disgraceful and malicious knaves (self-deemed members of the medical profession) who sought to destroy a reputation which they could not share. They gained nothing except some little unenviable notoriety and they have skulked away like famished wolves, to die in their hiding places.

The dates of Beaumont's commissions in the army are as follows: Surgeon's Mate, Sixth Regiment of Infantry, Dec. 2, 1812; Cavalry, March 27, 1819; Post Surgeon, Dec. 4, 1819; Surgeon First Regiment and Surgeon, Nov. 6, 1826.

From the biographical sketches of Reyburn, Steele and Lutz, and from the personal reminiscences of his friends, Drs: J. B. Johnson, S. Pollak and Wm. McPheeters, who fortunately remains with you, full of years and honors, we gather a clearly-defined picture of the latter years of his life. It is that of a faithful, honest, hard-working practitioner, doing his duty to his patients, and working with zeal and ability for the best interests of the profession. The strong common sense which he exhibited in his experimental work made him a good physician and a trustworthy adviser in cases of surgery. Among his letters there are some interesting pictures of his life, particularly in his letters to his cousin, Dr. Samuel Beaumont. Writing to him April 4, 1846, he says:

I have a laborious, lucrative and increasing practice, more than I can possibly attend to, though I have an assistant, Dr. Johnson, a young man who was a pupil of mine from 1835 to 1840. He then went to Philadelphia a year or two to attend lectures, and graduated, and returned here again in 1842, and has been very busy ever since and is so now, but notwithstanding I decline more practice daily than half the doctors in the city get in a week. You thought when you were here before that there was too much competition for you ever to think of succeeding in business here—there is ten times as much now and the better I succeed and prosper for it. You must come with a different feeling from your former—with a determination to follow in my wake and stem the current that I will break for you. I am now in the grand climacteric of life, three-score years and over, with equal or more zeal and ability to do good and contribute to professional service than at forty-five, and I now look forward with pleasing anticipation of success and greater usefulness—have ample competence for ourselves and children, and no doleful or dreaded aspect of the future—to be sure I have to wrestle with some adverse circumstances of life, and more particularly to defend myself against the envious, mean and professional jealousies and the consequent prejudices of some men, but I triumph over them all and go ahead in defiance of them.*

His professional work increased enormously with the rapid growth of the city, but he felt, even in his old age, that delicious exhilaration which it is your pleasure and privilege to enjoy here in the west in a degree rarely experienced by your eastern confrères. Here is a cheery paragraph from a letter dated Oct. 20, 1852: "Domestic affairs are easy, peaceable and pleasant. Health of community good—no severe epidemic diseases prevalent—weather remarkably pleasant—business of all kinds increasing—product of the earth abundant—money plenty—railroads progressing with almost tele-

* He had evidently hoped that when his cousin and son arrived with Alexis they would arrange and plan for another series of experiments and in another year or two make another book, better than the old one.

graphic speed,—I expect to come to Plattsburgh next summer all the way by rail."

But work was becoming more burdensome to a man nearing threescore years and ten, and he expresses it in another letter when he says: "There is an immense professional practice in this city. I get tired of it, and have been trying hard to withdraw from it altogether, but the more I try the tighter I seem to be held to it by the people. I am actually persecuted, worried and almost worn out with valetudinarian importunities and hypochondriacal groans, repinings and lamentations—Amen."

He continued at work until March, 1853, when he had an accident—a fall while descending some steps. A few weeks later a carbuncle appeared on the neck, and proved fatal April 25. One who knew him well wrote the following estimate (quoted by Dr. F. J. Lutz in his sketch of Beaumont):

"He was gifted with strong natural powers, which working upon an extensive experience in life, resulted in a species of natural sagacity, which, as I suppose, was something peculiar in him, and not to be attained by any course of study. His temperament was ardent, but never got the better of his instructed and disciplined judgment, and whenever or however employed, he ever adopted the most judicious means for attaining ends that were always honorable. In the sick room, he was a model of patience and kindness, his intuitive perceptions, guiding a pure benevolence, never failed to inspire confidence, and thus he belonged to that class of physicians whose very presence affords Nature a sensible relief."

You do well, citizens of St. Louis and members of our profession, to cherish the memory of William Beaumont. Alive you honored and rewarded him, and there is no reproach against you of neglected merit and talents unrecognized. The profession of the northern part of the state of Michigan has honored itself in erecting a monument to his memory near the scene of his disinterested labors in the cause of humanity and science. His name is linked with one of your educational institutions, and joined with that of a distinguished laborer in another field of practice. But he has a far higher honor than any you can give him here—the honor that can only come when the man and the opportunity meet—and match. Beaumont is the pioneer physiologist of this country, the first to make an important and enduring contribution to this science. His work remains a model of patient, persevering investigation, experiment and research, and the highest praise we can give him is to say that he lived up to and fulfilled the ideals with which he set out and which he expressed when he said: "Truth, like beauty, when 'unadorned, is adorned the most,' and, in prosecuting these experiments and enquiries, I believe I have been guided by its light."

APPENDIX A.

The Beaumont papers in the possession of his daughter, Mrs. Keim of St. Louis, consist of (1) interesting certificates from his preceptors, Dr. Pomeroy and Dr. Chandler, the license from the Third Medical Society of Vermont, the commissions in the U. S. Army, several certificates of honorary membership in societies, and the parchment of the M.D. degree conferred upon him, *honoris causa*, by the Columbian University of Washington, 1833; (2) a journal containing his experiences in the War of 1812, from which I give an extract, a journal of his trip to Fort Mackinac, a journal containing the reports of many cases, among them that of St. Martin (in addition there is a protocol of the case in loose folio sheets), a journal of the experiments, and a commonplace book of receipts and jottings; (3) an extensive correspondence relating to St. Martin and the

book, and many rough drafts of sections of the book; (4) a large mass of personal correspondence, much of it of interest as relating to conditions of practice in St. Louis.

The picture reproduced here in his army uniform is from a miniature; the picture which has been previously reproduced is of an older man from a daguerreotype. It is satisfactory to know that the ultimate destination of this most valuable collection of papers is the Surgeon-General's Library of the United States Army, of which Dr. Beaumont was so distinguished an ornament.

APPENDIX B.

On Oct. 20, 1853, he writes to his cousin, Dr. Samuel Beaumont, on the subject of "that old, fistulous Alexis," as he calls him. "Alexis' answer to yours is the very fac-simile or stereotype of all his Jesuitical letters to me for the last fifteen years. His object seems only to be to get a heavy bonus and undue advance from me and then disappoint and deceive me, or to palm and impose himself and whole family upon me for support for life.

"I have evaded his designs so far; but I verily fear that the strong and increasing impulse of conscious conviction of the great benefits and important usefulness of further and more accurate physiological investigation of the subject will compel me to still further efforts and sacrifices to obtain him. Physiological authors and most able writers on dietetics and gastric functions generally demand it of me in trumpet tones.

"I must have him at all hazards, and obtain the necessary assistance to my individual and private efforts or transfer him to some competent scientific institution for thorough investigation and report—I must retrieve my past ignorance, imbecility and professional remissness of a quarter of a century, or more, by double diligence, intense study and untiring application of soul and body to the subject before I die—

Should posthumous Time retain my name,
Let historic truths declare my fame.

"Simultaneous with this I write to Mr. Morrison and Alexis my last and final letters—perhaps, proposing to him, as bribe to his cupidity, to give him \$500 to come to me *without* his family, for one year—\$300 of them for his salary, and \$200 for the support and contentment of his family to remain in Canada in the meantime—with the privilege of bringing them on here another year, upon my former proposition of \$300 a year, at his own expense and responsibility and support them himself after they get here out of his \$300 salary—I think he will take the bait and come on this fall, and when I get him alone again into my keeping and engagement, I will take good care to control him as I please."

APPENDIX C.

Letter from Dr. Andrew Combe, May 1, 1838:

"My Dear Sir—May I beg your acceptance of the accompanying volumes as a small expression of my respect for your character and scientific labors. I need not detain you by repeating in this note the high estimation in which I hold you. The volumes herewith sent will, I trust, convince you of the fact, and that it will not be my fault if you do not receive the credit justly due to your valuable and disinterested services. I remain, My Dear Sir, Very respectfully yours,

"ANDW. COMBE."

APPENDIX D.

Letter from Dr. Samuel Beaumont, March 16, 1846:

"Your letter of the 1st of February arrived here in the course of mail, and I have attended to the business which you authorized me to do. I am afraid, however, that you will be disappointed, and perhaps dissatisfied with the arrangement. Mr. Goodrich came here some five or six days after I received your letter, and made his proposal, which was to give you every tenth copy for the privilege of publishing an edition. The number he proposed to publish was fifteen hundred, which would give you 150 copies. I did not like to close the bargain on this condition, and he was not disposed to give any more. This was in the evening. I told him to give me time till the next morning, and I would make up my mind. In the morning, after consultation, I concluded to offer him the copyright for the unexpired time (only one year) for two hundred copies.

After some demurring, we closed the bargain. I then thought and I still think it was not enough; but it was all I could get. In making up my mind the following considerations presented themselves: First, that the copyright would expire in one year, and he would then have the right to print it without consulting the author; second, that it would be somewhat mortifying to the author not to have his work republished, even if no great pecuniary benefit was to be obtained by such a republication; and it appeared to me to be quite certain that a new edition would not be soon printed, if I let this opportunity slip; third, I have been long anxious, as I presume you have been, to see the work gotten up in a better dress than it originally had, and in a way which will give it a general credit and more notoriety among all classes of the reading public than it has heretofore possessed—in fact, make it a standard work; fourth, it has given us a chance to give it a thorough correction, a thing which was very desirable. The work, you recollect, was got up in a great hurry, and a great many errors escaped our notice. You may also recollect that the Philadelphia reviewer spoke of the inaccuracies in the work. And he had reason enough for it. In looking over the work critically with a view of correction, I have been perfectly astonished at the errors that occur on almost every page. And although we understood perfectly what we meant to say, the reader would find it somewhat difficult to decipher our meaning. In the first 140 pages I made nearly 300 corrections. These are practically merely verbal alterations or change of phrases or sentences so as to make them more accurate or perspicuous. I have in no case so changed the text as to give it a different meaning. I flatter myself that it will now be more worthy the public patronage; and if for no other, this chance for correction I consider alone almost a sufficient remuneration for the brief limits of the copyright. I have also written a preface for the second edition, making quotations from American and European authorities in praise of the merits of the work. From delicacy I have written this as from the publisher. I think it is pretty well done. The work will probably be published in the course of about a month, and those designed for you will be delivered to me, when I shall send them to you. He guarantees not to sell in the state of Missouri, or the states south and west of that state. But that, of course, is all gammon. The book will be thrown into market, and he can not control the direction in which it will go."

PNEUMONIA.

ITS FATALITY AND INCREASING PREVALENCE, WITH SUGGESTIONS FOR INDIVIDUAL AND COMMUNAL PROPHYLAXIS.*

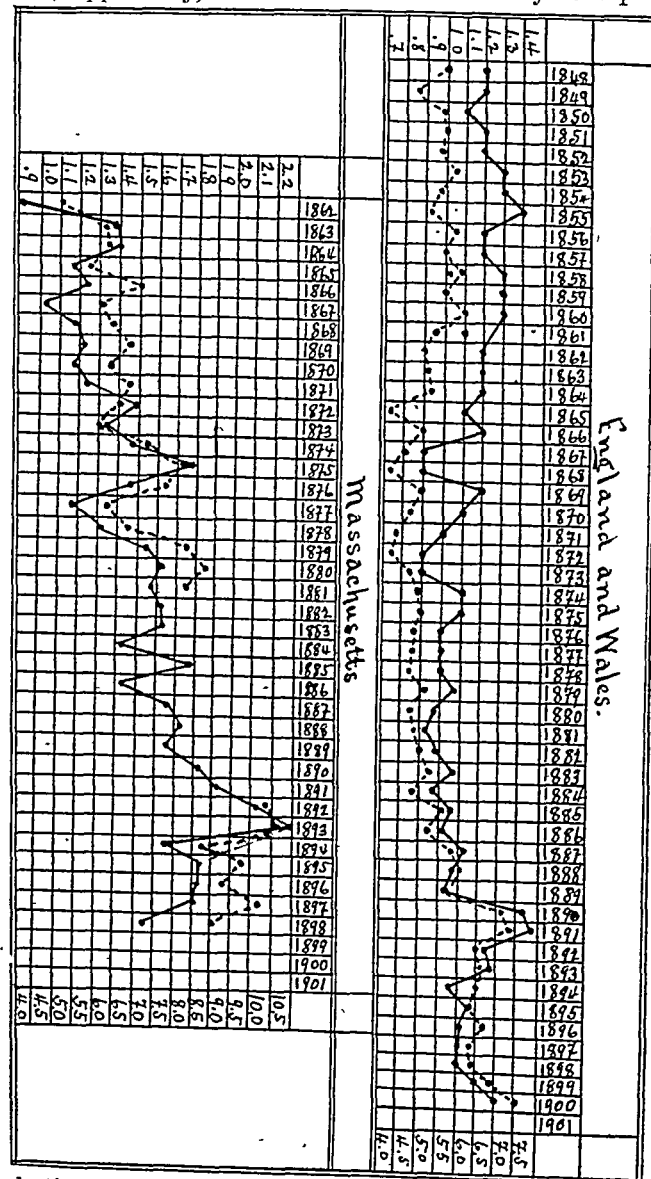
EDWARD F. WELLS, M.D.
CHICAGO.

Pneumonia has always attracted the earnest attention of physicians, from the times of Hippocrates and Galen to the present. Under its malign influence many illustrious persons have fallen, from Alexander the Great and Charlemagne to those of yesterday. It has appeared as local and widespread epidemics, and has always, in temperate regions especially, figured largely in mortality reports. It is, in many places, the greatest cause of death and its prevalence is notably increasing. Its cause is known, but definite and acceptable rules for prevention and treatment have not, as yet, been formulated. Taken as a whole it is the greatest medical problem of the day.

Pneumonia is an acute infectious disease, with definite symptoms and anatomic changes, due to the presence and exuberant growth of the pneumococcus in the pulmonary alveoli. It probably obtains entrance into the air cells of the lung from the upper respiratory pas-

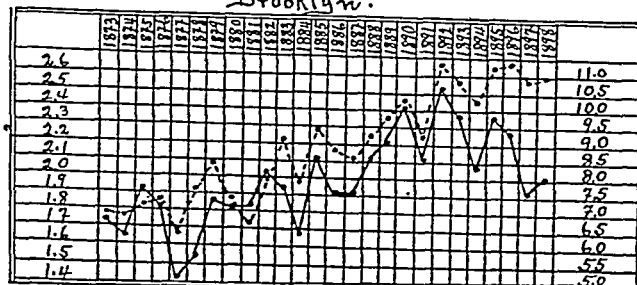
sages, where it may be found, without producing any obvious deleterious effects, in a large proportion of healthy persons.

The pneumococcus is cultivated with some difficulty and, apparently, does not lend itself readily to sapro-



phytic existence, although it is certainly found in this state. It has not been found, so far as I know, in the air, yet it is certain that the bacterium is received into the system through the inspired air. Whether it is

Brooklyn.



transported by the air in the form of dust from the dried and pulverized pneumococcus-laden secretions, or as a spray of such secretions thrown off by an infected person in coughing, hawking or sneezing is not known. but probably either is sufficient to convey the bacterium

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. Arthur R. Reynolds, George Cook and Heman Spalding.

graphic speed,—I expect to come to Plattsburgh next summer all the way by rail.”

But work was becoming more burdensome to a man nearing threescore years and ten, and he expresses it in another letter when he says: “There is an immense professional practice in this city. I get tired of it, and have been trying hard to withdraw from it altogether, but the more I try the tighter I seem to be held to it by the people. I am actually persecuted, worried and almost worn out with valetudinarian importunities and hypochondriacal groans, repinings and lamentations—Amen.”

He continued at work until March, 1853, when he had an accident—a fall while descending some steps. A few weeks later a carbuncle appeared on the neck, and proved fatal April 25. One who knew him well wrote the following estimate (quoted by Dr. F. J. Lutz in his sketch of Beaumont):

“He was gifted with strong natural powers, which working upon an extensive experience in life, resulted in a species of natural sagacity, which, as I suppose, was something peculiar in him, and not to be attained by any course of study. His temperament was ardent, but never got the better of his instructed and disciplined judgment, and whenever or however employed, he ever adopted the most judicious means for attaining ends that were always honorable. In the sick room, he was a model of patience and kindness, his intuitive perceptions, guiding a pure benevolence, never failed to inspire confidence, and thus he belonged to that class of physicians whose very presence affords Nature a sensible relief.”

You do well, citizens of St. Louis and members of our profession, to cherish the memory of William Beaumont. Alive you honored and rewarded him, and there is no reproach against you of neglected merit and talents unrecognized. The profession of the northern part of the state of Michigan has honored itself in erecting a monument to his memory near the scene of his disinterested labors in the cause of humanity and science. His name is linked with one of your educational institutions, and joined with that of a distinguished laborer in another field of practice. But he has a far higher honor than any you can give him here—the honor that can only come when the man and the opportunity meet—and match. Beaumont is the pioneer physiologist of this country, the first to make an important and enduring contribution to this science. His work remains a model of patient, persevering investigation, experiment and research, and the highest praise we can give him is to say that he lived up to and fulfilled the ideals with which he set out and which he expressed when he said: “Truth, like beauty, when ‘unadorned, is adorned the most,’ and, in prosecuting these experiments and enquiries, I believe I have been guided by its light.”

APPENDIX A.

The Beaumont papers in the possession of his daughter, Mrs. Keim of St. Louis, consist of (1) interesting certificates from his preceptors, Dr. Pomeroy and Dr. Chandler, the license from the Third Medical Society of Vermont, the commissions in the U. S. Army, several certificates of honorary membership in societies, and the parchment of the M.D. degree conferred upon him, *honoris causa*, by the Columbian University of Washington, 1833; (2) a journal containing his experiences in the War of 1812, from which I give an extract, a journal of his trip to Fort Mackinac, a journal containing the reports of many cases, among them that of St. Martin (in addition there is a protocol of the case in loose folio sheets), a journal of the experiments, and a commonplace book of receipts and jottings; (3) an extensive correspondence relating to St. Martin and the

book, and many rough drafts of sections of the book; (4) a large mass of personal correspondence, much of it of interest as relating to conditions of practice in St. Louis.

The picture reproduced here in his army uniform is from a miniature; the picture which has been previously reproduced is of an older man from a daguerreotype. It is satisfactory to know that the ultimate destination of this most valuable collection of papers is the Surgeon-General's Library of the United States Army, of which Dr. Beaumont was so distinguished an ornament.

APPENDIX B.

On Oct. 20, 1853, he writes to his cousin, Dr. Samuel Beaumont, on the subject of “that old, fistulous Alexis,” as he calls him. “Alexis’ answer to yours is the very fac-simile or stereotype of all his Jesuitical letters to me for the last fifteen years. His object seems only to be to get a heavy bonus and undue advance from me and then disappoint and deceive me, or to palm and impose himself and whole family upon me for support for life.

“I have evaded his designs so far; but I verily fear that the strong and increasing impulse of conscious conviction of the great benefits and important usefulness of further and more accurate physiological investigation of the subject will compel me to still further efforts and sacrifices to obtain him. Physiological authors and most able writers on dietetics and gastric functions generally demand it of me in trumpet tones.

“I must have him at all hazards, and obtain the necessary assistance to my individual and private efforts or transfer him to some competent scientific institution for thorough investigation and report—I must retrieve my past ignorance, imbecility and professional remissness of a quarter of a century, or more, by double diligence, intense study and untiring application of soul and body to the subject before I die—

Should posthumous Time retain my name,
Let historic truths declare my fame.

“Simultaneous with this I write to Mr. Morrison and Alexis my last and final letters—perhaps, proposing to him, as bribe to his cupidity, to give him \$500 to come to me *without* his family, for one year—\$300 of them for his salary, and \$200 for the support and contentment of his family to remain in Canada in the meantime—with the privilege of bringing them on here another year, upon my former proposition of \$300 a year, at his own expense and responsibility and support them himself after they get here out of his \$300 salary—I think he will take the bait and come on this fall, and when I get him alone again into my keeping and engagement, I will take good care to control him as I please.”

APPENDIX C.

Letter from Dr. Andrew Combe, May 1, 1838:

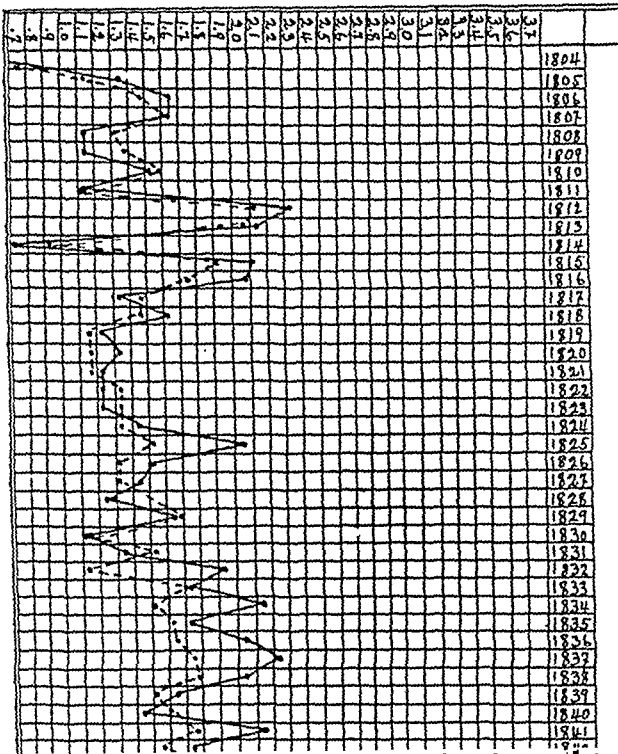
“My Dear Sir—May I beg your acceptance of the accompanying volumes as a small expression of my respect for your character and scientific labors. I need not detain you by repeating in this note the high estimation in which I hold you. The volumes herewith sent will, I trust, convince you of the fact, and that it will not be my fault if you do not receive the credit justly due to your valuable and disinterested services. I remain, My Dear Sir, Very respectfully yours,

“ANDW. COMBE.”

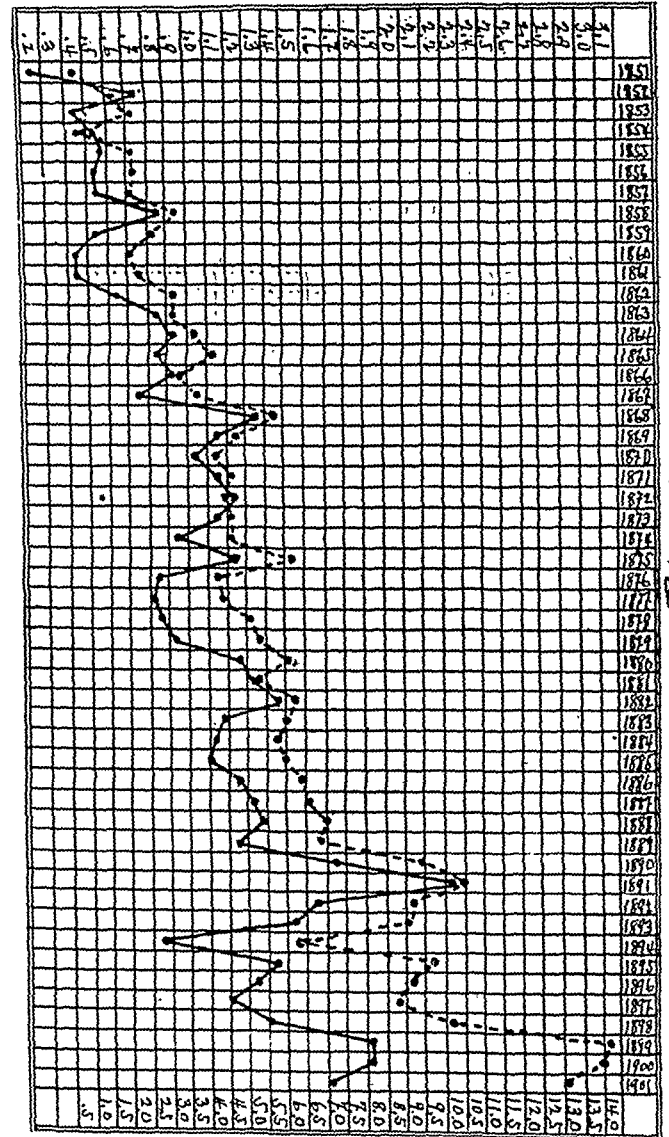
APPENDIX D.

Letter from Dr. Samuel Beaumont, March 16, 1846:

“Your letter of the 1st of February arrived here in the course of mail, and I have attended to the business which you authorized me to do. I am afraid, however, that you will be disappointed, and perhaps dissatisfied with the arrangement. Mr. Goodrich came here some five or six days after I received your letter, and made his proposal, which was to give you every tenth copy for the privilege of publishing an edition. The number he proposed to publish was fifteen hundred, which would give you 150 copies. I did not like to close the bargain on this condition, and he was not disposed to give any more. This was in the evening. I told him to give me time till the next morning, and I would make up my mind. In the morning, after consultation, I concluded to offer him the copyright for the unexpired time (only one year) for two hundred copies.



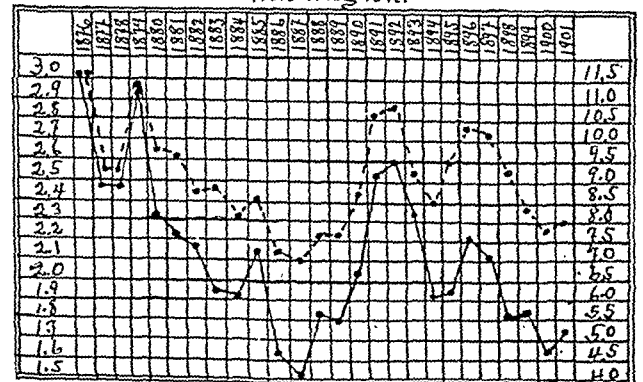
Now to what influences may this increased prevalence be attributed? That it is due to any general deterioration of the resisting powers of the populace to morbid



Chicago.

infections is disproved by the fact that the average duration of human life has been distinctly lengthened during these same years. It is likewise difficult to believe that there has been any general increased vulnerability to this particular bacterial infection. We are, therefore, driven to the inference that the pneumococcus

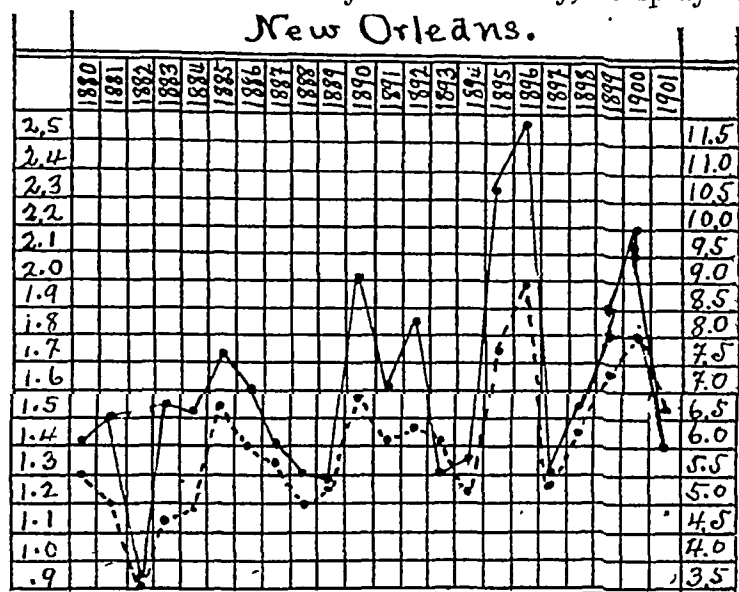
Washington.



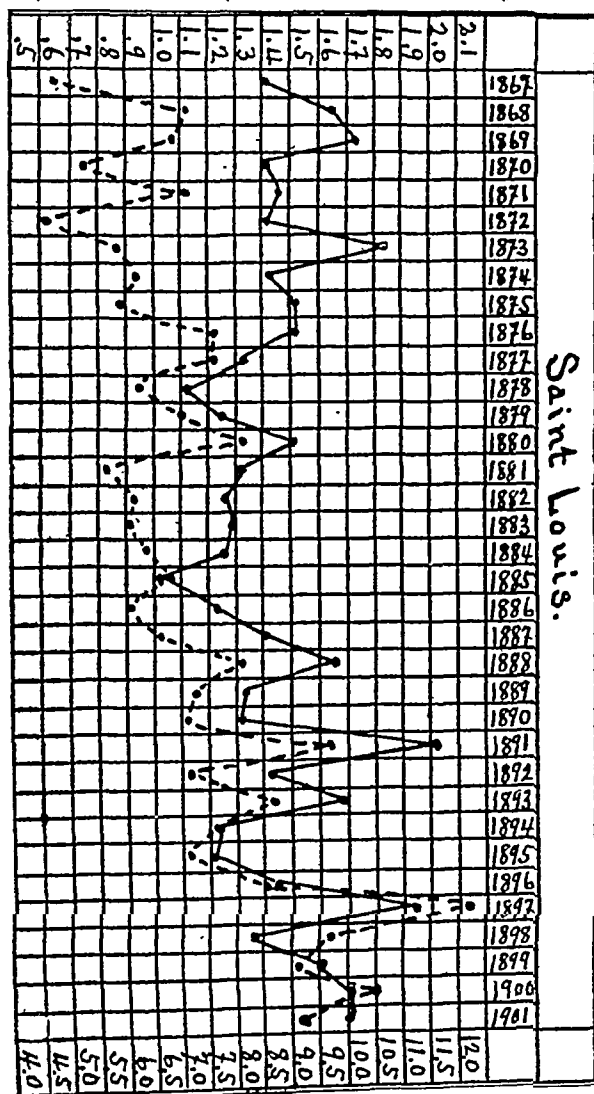
conclusion is irresistible that the prevalence of this malady has notably increased during the period of time covered by this inquiry.

has become more prevalent, or that our opportunities for encountering the germ have been multiplied, or, more likely, that these are both operative in bringing

about the results mentioned. If the natural habitat of the pneumococcus is the upper respiratory passages of man, and if it here finds its best culture media, and if these pneumococcus-laden secretions are extruded in such manner that they find their way, as spray or



dust, into the respiratory passages of other unaffected persons, then the very general absolute and proportional increase of urban populations, the increased facilities for travel and the universal tendency for people everywhere, in city and in the country, to congre-



gate and mingle together, is clearly sufficient to account for much, if not the whole, of the increased prevalence of pneumonia.

Now, although this is a fair inference, yet we lack exact information on this point and a compilation of the

existing pertinent knowledge, together with well-arranged and devised series of investigations along these lines will certainly prove of value and may open up most important avenues of prophylaxis.

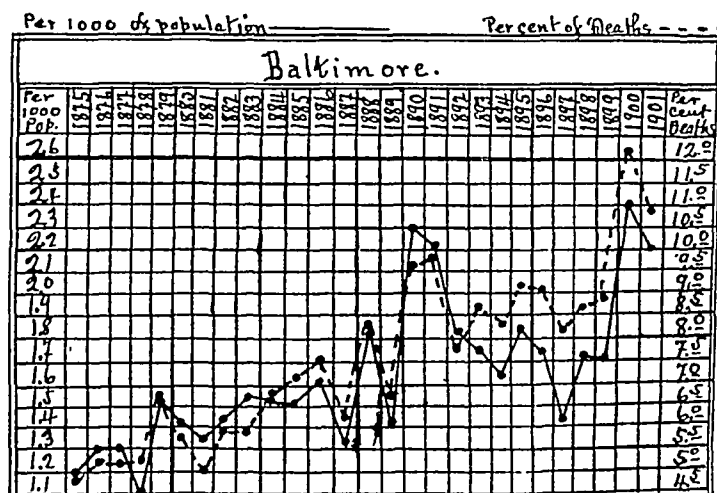
There is one contributory cause of pneumonia which, although not demonstrable, I believe to be operative and which deserves special mention; I refer to the weakening of the respiratory reflexes, especially during sleep, which follows chilling of the surface of the physically and mentally exhausted body.

CONCLUSIONS.

1. The fatality of pneumonia has increased but little if any during the past eighty years.

2. The prevalence of pneumonia has steadily increased during the past fifty years and during the past twenty years this increase has been very great.

3. For individual prophylaxis the nasal, pharyngeal and oral cavities should be kept as free as possible from accumulations of mucus, and when it has been demonstrated that such secretion contains the pneumococcus such efforts should be especially well directed and maintained. In addition, care should be taken not to become chilled when overtired. The individual should, as far as practicable, keep out of range of the extruded pneumococcus-laden secretions of infected individuals. The sputum and other secretions of the respiratory surfaces



of pneumonic patients, or of other infected individuals, should be destroyed before it has been allowed to become dry. Such persons should cough and sneeze into a moistened cloth.

4. For communal prophylaxis the information and advice above given should be kept before physicians, with the request that, if they can consistently do so, they give it as their instructions to their patients.

5. That there may be some comparatively simple means by which pneumonia may be prevented, but that the fundamental information on which prophylactic rules may be formulated is not yet at hand; therefore it should be the province and duty of public health officers to seek assiduously for such knowledge, and I would suggest that, as a preliminary step in this direction, pneumonia be placed on the list of notifiable diseases and that the environment of pneumonic patients be carefully noted and the results analyzed.

Antidote for Formaldehyd.—In view of the fact that this chemical is coming more and more into general use as a disinfectant and antiseptic, cases of poisoning from it will become more frequent. We have an easily-accessible and reliable antidote in ammonia water. It may be given in the form of ammonia water (a few drops well diluted) or the aromatic spirit or a solution of ammonium acetate.—*Merck's Archives.*

PNEUMONIA.

ITS INCIDENCE, MORTALITY, PROPHYLAXIS.*

JAMES J. WALSH, M.D., PH.D.
NEW YORK CITY.

The mortality from pneumonia is distinctly on the increase in all our large cities. This increase is taking place notwithstanding the fact that mortality from other infectious sources is decreasing. We hear much of diphtheria and smallpox. Their ravages are as naught to pneumonia. While the death rate from such important causes as heart disease, brain disease and consumption is on the wane, that of pneumonia is constantly on the increase. There is no doubt now that pneumonia is an infectious disease, yet notwithstanding the decrease in mortality in other infectious diseases, pneumonia is becoming a universally more serious danger.

INCREASE IN MORTALITY.

It is true that the pneumonia mortality is on the increase, especially among the old, and that the improved sanitary conditions in our cities have raised the age limit to a marked extent. The increase of persons living above 60 in our cities is not, however, as has been shown by the Chicago Department of Health, enough to explain the even greater increase of deaths from pneumonia at all ages. The survival of many delicate children who formerly perished in infancy also adds to the pneumonia death rate, but not enough to account for the present additional mortality. In a generation that has seen the mortality in our large cities cut in two and has been informed by the last census that the length of a generation has increased from about 31 to over 35 years, and that has seen the death rate from consumption so much lessened as to make us confident of eventually preventing the ravages of the "great white plague of the north," tuberculosis, pneumonia continues to be an ever more threatening factor. In the words of Professor Osler, pneumonia has now taken the place of tuberculosis in what Defoe described as "the Captain of the Men of Death."

These considerations of themselves are sufficient to justify us in treating the problem of the prevention, or at least the lessening, of pneumonia as the most important sanitary question before the present generation.

CONTAGION OF PNEUMONIA.

While it is well known and recognized that pneumonia is an infectious disease, the possibilities of its contagiousness are still in doubt. The best clinicians all over the world are agreed that it is. Among young soldiers in France and Germany, where patients are liable to be in a condition of low resistive vitality, living rather crowded together in old, unsanitary barracks, a number of concomitant cases of pneumonia have been reported each year for many years, that seem to be of the nature of an epidemic. In the wards of hospitals in many parts of the world the admittance of a case of pneumonia, even when this affection was not due to grippe, has been known to be followed by the occurrence of other cases among the patients in the same ward. At public schools a series of cases of pneumonia have been seen occurring under such circumstances as to lead to the thought that an epidemic of pneumonia was at work. One school last winter obtained an unenviable notoriety by having two series of pneumonia cases within its walls.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. Arthur R. Reynolds, George Cook and Heman Spalding.

It would seem important, then, first of all to insure precautions against the spread of the disease by teaching the general public that there is always an element of contagion-danger in a pneumonia case, and that certain protective and prophylactic measures are at least eminently advisable in order to avoid all danger. The secretions of pneumonia patients should be thoroughly sterilized by heat or should be subjected to strong chemical antiseptics. The expectoration of pneumonia reeks with bacilli. It is often received into napkins or handkerchiefs, and must not be allowed to dry and find its way into the air, but must be carefully disposed of by those in attendance on the patient. Practically the same precautions as are now invariably instituted with regard to tuberculosis should be suggested for pneumonia.

Such directions will doubtless seem exaggeration of caution, not only to the general public, but to most medical men. Let us remember that the profession generally would have been quite as opposed to the suggestion of these precautions with regard to pulmonary tuberculosis twenty-five years ago. Now every one realizes that the old position in the matter was a serious mistake and founded on an erroneous opinion tenaciously held. The same thing may prove to be true of pneumonia.

DUST AS A CAUSE.

It is often assumed that pneumonia is almost exclusively a disease of cold weather. 'Because, like other infectious fevers, it usually starts with a chill, it is often thought to be due to that charity mantle in etiology, the catching of a cold. As it affects the respiratory region this idea of a cold in its etiology is confirmed. It is well known, however, that pneumonia is by no means limited to very cold weather, but, on the contrary, may occur at any season of the year, when the conditions for its development are present. It is most frequent in the spring and the fall. Very cold weather is not the time when pneumonia is apt to be prevalent. It occurs particularly after a series of days without sunlight. This is usually damp weather, and the dampness is supposed to favor the taking of colds—hence the pneumonia. As a matter of fact, however, it would seem that the absence of sunlight and the presence of moisture favors the growth and multiplication of many micro-organisms, and among them especially the pneumonia pneumococcus.

It is well known that this micro-organism occurs in the throats even of healthy individuals. It seems, probably, however, that when there are large numbers present the risk of a pulmonary affection is greatly increased. Micro-organisms do not grow apart from the presence of organic material. The occurrence of street dirt rich in organic material, as is true of city streets, constitutes an especially favorable culture medium. We do not know that the pneumococcus would grow thus as a saprophyte, but there is reason to suspect it from its universal occurrence. In the absence of sunlight germs grow luxuriantly, and consequently the special tendencies to the occurrence of pneumonia in the spring and fall.

PROPHYLAXIS AND CLEAN STREETS.

At other seasons of the year it would seem that dust constitutes one of the disturbing agents for such germs. It is well known that windy days are apt to be followed by a series of pneumonia cases. It has usually been said under these circumstances that the irritation of the respiratory tract by the cold air which found its way in, was the prime factor in the production of pneumonia. Windy days, however, in which the wind is not

necessarily cold, has been known to give rise to an increased incidence of pneumonia.

The question of clean streets, then, would seem to be an extremely important basic principle in the general prophylaxis of pneumonia. The street-cleaning commission of our large cities is in this matter the sanitary bureau of first importance. A time will probably come when the city sanitary engineer will consider it quite as objectionable, or even more undesirable on the score of public health, to have dusty streets as to have malodorous drains and other such presumably serious unhealthy conditions.

INFECTION IN CROWDED ASSEMBLIES.

There are other forms of dust inhalation to which special attention will have to be given. The history of many cases of pneumonia have as one of their features the presence of the patient in a crowded hall, theater, church or some numerous assemblage within a few days before the development of the affection. The germs of the disease evidently get into the air in such places with more frequency than under other conditions and are taken up by the respiratory mucous membrane. In normally healthy individuals they fail to develop. In those, however, who are run down from overwork, or worry, or some serious pathologic condition, or whose vital resistance is lowered by old age, or some already existent respiratory affection, the germs of pneumonia find a favorable soil for luxuriant growth.

The conditions under which patients enter and leave such assemblies are especially favorable for the bacteria to obtain a foothold in the tissues. Not infrequently in colder weather, the mucous membranes are blanched by contact with the cold outer air, and while in this anemic condition become covered with whatever germs may be clinging to the dust particles of the room. Before the normal reaction occurs that restores the usual amount of blood to the respiratory mucous membrane, some of the germs may easily have secured a lurking place beneath the outer layer of cells. After the exposure to the germ-laden atmosphere on the exit from the theater or other meeting place the cold air is once more encountered and the circulation in the respiratory mucous membrane is once more interfered with by the contraction of the peripheral vessels and the consequent blanching of the tissues that takes place.

It is evident, then, that these meeting places must have special attention from boards of health if the dangers involved in the breathing of a dust-laden atmosphere in which many organic particles find a place, are to be avoided. Unfortunately theaters, because of economic conditions in our large cities, are so built that they are entirely beyond the cleansing bactericidal influence of direct sunlight. The result of this is that they may very easily become ideally favorable breeding places for many forms of germs and are undoubtedly the source of many of the colds and also of the pneumonias of the winter time. Churches are prone to be rather dark structures also, and though the sunlight has more chance to purify the air, its presence is not encouraged to any great extent.

It seems not improbable, therefore, that in the future regulations may have to be made requiring the arrangement of meeting places in such a way that they can be subjected for several hours each day to the influence of direct sunlight. Not only this, but it is probable that the present custom of heavy upholstery and thick, permanently-laid carpets will have to be discouraged. On the other hand, well-polished hardwood floors and readily removable rugs and matings are ideally san-

itary for such places. The floors will have to be of a kind that can readily be cleansed without the necessity of raising too much dust, and whatever dusting is done will have to be finished many hours before the crowd is to assemble.

Such regulations may seem far-fetchedly theoretic and perhaps unjustified by present conditions. The physician who announced twenty-five years ago that the spitting nuisance in public places would have to be regulated by law, would surely have been laughed at, as suggesting a Utopian idea, rather esthetic than sanitary. The present increase from mortality by pneumonia in our large cities justifies the taking of the most serious precautions. It is along the lines of thought suggested by the questions of the association of dirt and dust with pneumonia that the most hopeful prospects of prophylaxis and improvement of present conditions seem possible. Crowded centers are more liable to pneumonia because of the fact that the secretions of human beings are in themselves dangerous and their accumulation, even in impalpable dust, may prove a source of very serious danger.

GAS LEAKAGE AND DEFECTIVE DRAINAGE.

There seems to be no doubt on the part of many clinicians and sanitary authorities that defective house drainage forms one of the most prominent sources of predisposition to pneumonia. The statistics of the workmen in the Paris and London sewers and of the small army of men employed on the sewage farms of Berlin do not show any special prevalence of the disease. It seems probable, then, that general sewage, with its large abundance of watery elements holding most of the gaseous constituents present in solution, is not particularly dangerous. The more concentrated sewage of house and the leakage into house drains of various irritating ingredients from house illuminating gas would seem to be the worst etiologic factor.

It is a matter of record now that millions of feet of illuminating gas escape beneath the pavements of our cities each year. In the residence district pavements are apt to be of asphalt and so hermetically seal the gas in the soil. Its only mode of exit, then, is through the walls of houses and into branch sewers, from which it finds its way easily into living rooms. This irritant material keeps the lungs in a low state of congestion rather favorable to the growth of the pneumococcus should it once obtain an entrance into the lungs. It seems probable that sanitary authorities will have to take account of the gas leakage in their attempt to lessen the incidence and mortality from pneumonia.

DISCUSSION

ON PAPERS OF DRS. WELLS AND WALSH.

DR. N. S. DAVIS, Jr., Chicago—The conclusion Dr. Wells has arrived at is particularly interesting—and it seems perfectly justified by the figures which he quotes—that the mortality from pneumonia is not increasing. I think the opinion of the profession has been—as certainly my own has been—that it was increasing. One thing to bear in mind, however, is that the statistics before 1830 are of comparatively little use, because until a method of differentiating between pneumonia and a number of other diseases, especially pleurisy, was shown by Laënnec and generally understood, proper records could not be kept. Moreover, it was not until near the middle of the century that reliable statistics began to be gathered by public officials. The statistics of Dr. Wells between 1835 and 1855 will probably be found, if closely examined, to contain an over-statement of the mortality from pneumonia. As a consequence a more abrupt descent of the line of mortality than is represented on these charts would be correct. On the other

hand, mortality from pneumonia is more frequently recognized by physicians than formerly. Many cases were overlooked—especially cases that occurred in old age and that followed injuries and surgical operations. All these are now included and tend to increase the death-rate in the more recent returns over those of the earlier years. It is possible, therefore, that if we had more accurate information, which it seems impossible to get now, it would be found that this line of increase is exaggerated.

There is little to add in regard to prophylaxis. The subject is one of extreme importance, and one we ought to talk about, not only in the profession, but among laymen with a view of inducing them to adopt prophylactic measures. I believe with Dr. Walsh that, not only for the purpose of lessening the mortality from pneumonia, but decreasing other diseases as well, the greatest care should be taken in regard to the sanitary condition of places and vehicles where large numbers of people are wont to be gathered together. This is particularly necessary in regard to street cars which are badly ventilated, often very foul and very crowded; no places are more apt to become centers for the spread of infectious diseases.

DR. GEORGE M. KOBER, Washington—My impression, gathered from studying the official census statistics, is that there is a decided increase in the mortality from this disease within the registration area, and this is all the more surprising as there has been a marked decrease in the death-rate from consumption and all other infectious diseases and the span of life since 1890 has been lengthened about five years. The probable causes of the increased prevalence of pneumonia and its greater fatality have been well stated by previous speakers. One fact worthy of consideration is whether the increasing quantity of alcohol consumed in this country, amounting to over 17 gallons per capita, may not be a predisposing factor. An analysis of the mortality statistics shows that there is an increase in diseases of the heart, liver and kidneys and dropsies. These are diseases influenced by the undue consumption of alcohol, and in regard to pneumonia those who have had experience know that alcoholic subjects are exceedingly unpromising cases for treatment and usually succumb to the disease. This would seem to bear out the idea that alcohol is a predisposing factor in its production. But whatever the cause for the undue prevalence of pneumonia may be, greater effort to prevent the spread of the disease should be made by scientific disinfection and the adoption of general and individual prophylactic measures.

DR. A. ROBIN, Newark, Del.—In examining sputum at the Delaware State Board of Health Laboratory, I have frequently observed pneumococci in normal sputum. The pneumococci, when isolated in two or three instances, proved pathogenic to rabbits. This fact shows that the human being enjoys a natural immunity from pneumonia, except when that immunity is reduced by exposure or disease. I incline to agree with the view expressed by the Chairman (Dr. A. R. Reynolds) in one of the bulletins of the Chicago Board of Health concerning the relation of gripe to pneumonia. It is possible that influenza reduces the vitality of the organism, rendering it more susceptible to pneumonia, or the pneumococcus is rendered more virulent by a symbiosis with the bacillus of influenza. Another point I would call attention to is that many patients who die from pneumonia die from toxemia rather than consolidation, the latter in itself not being sufficient to cause death. A case has come under my notice in which a patient, a robust and previously healthy woman, contracted pneumonia after an attack of gripe, and succumbed on the fourth day of the disease, or long before consolidation was far advanced. In these cases the respiratory difficulties are due to a paralysis of the respiratory centers.

DR. H. M. BRACKEN, Minneapolis—Dr. Walsh has given us statistics in regard to the cities. It may be well to add something about the country districts. I regret that I have so little data to offer, but I have had occasion to note the statistics for Minnesota. This state has in the past had a small number of cases of pneumonia as compared with eastern states, but about a year and a half ago I noticed that the deaths from this cause appeared to be on the increase. I wrote and spoke on the subject to physicians in the small villages and rural districts of

the state, and the general opinion expressed was that there had been more pneumonia of late than formerly. The rate of mortality, it is also agreed, had been much higher than previously.

DR. WELLS—I have very little to add except to dwell for a moment on the question brought up by Dr. Davis as to diagnosis and its bearing on the accuracy of my statistics. In gathering the statistics from England and Wales for the early days of the past century I was particularly careful in the conclusions I drew. I always compared the mortality from pneumonia with that from other diseases of the respiratory tract with which it might be confused. I noted as far as possible the symptoms described and in this connection I may allude to the work of Dr. Cleghorn on the island of Minorca, in 1744 and 1745. He has given us a description of pneumonia which is, in some respects, well up to that given in most of the advanced text-books of to-day. The same is true of the descriptions given by Cullen, Brown and others, and in fact studying the literature on the subject one is forced to the conclusion that, comparatively speaking, pneumonia was as easily recognized in days past as it is now. My observation is that even in these days a pretty large proportion of physicians make a diagnosis on symptoms that might have been recognized as well years ago as now. Personally, I am of opinion that the diagnosis of pneumonia, for statistical purposes, was fairly accurate in the earlier years of the last century, and that the figures I have quoted may therefore be relied on as showing the actual increase in the disease. The prevalence of influenza no doubt accounts for the great increase that has taken place in the last ten years; but the general increases have been going on gradually for a much longer period, thus showing that there must be some other factor at work.

VENESECTION.*

H. B. FAVILL, M.D.
CHICAGO.

I will not apologize for occupying your attention with a topic to which I am able to bring neither new facts nor satisfactory conclusions. My excuse is the importance of the subject.

You will agree with me, first, that there has been during the last few years a tendency to place a greater value on bleeding; second, that the indications for its use are vague and indefinite as now defined in the literature, and you may agree, third, that it is of the utmost importance that this procedure of recognized value be not again discredited by indiscriminate employment in obviously inappropriate conditions.

Nowhere can one glean a more instructive lesson than in following the steps of Trousseau as he slowly drew away from the then dominant views as to venesection, sifting out with his rare judgment the real from the apparent and finally taking a stand that was quite out of harmony with his contemporaries. It is noteworthy, however, that his reservations as to the value of bleeding were in general centered on two aspects of the subject: the antiphlogistic, which he did not subscribe to, and the purely mechanical, as, for instance, the value of bleeding to check or remove cerebral hemorrhage, which he likewise discredited. Both of these reservations he fortified by convincing experience, not only as to non-efficacy, but with a positive opinion that patients so treated progressed less favorably than others. It is not likely that on these aspects of the matter his judgment will be found faulty. At that time, however, there was hardly considered the specific relation of the blood vessel contents and the inadequate heart.

Time has developed a view that there is a condition liable to occur in which there is, for various reasons, an

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. Frank A. Jones, George Dock and J. M. Anders.

ber in the *Medical News*, entitled "The Treatment of Pneumonia." My experience with the withdrawal of blood in pneumonia shows that it will not only benefit the patient's symptoms but also the physical condition of the lungs as shown by the physical signs. I do not pretend to be able to explain what reaction follows this procedure, but I maintain that when the lung is in a state of congestion and we allow a moderate amount of blood to leave the body there will be an almost invariable cessation of the advancing consolidation for a considerable period. I do not mean to say that it cuts short the course of the disease; it apparently delays consolidation. If one studies the physical signs over a particular region of the lobe he will find that consolidation does not go on to maturity, and that the breathing is better for a period of twelve to eighteen hours after the withdrawal of blood; but subsequently consolidation will occur. Any measure that delays consolidation on the fifth, sixth or seventh day of a pneumonia is a valuable one and may save lives. I think that if we can delay the consolidation and, at the same time, relieve symptoms by the withdrawal of blood we should do so. In my experience the withdrawal of from 200 to 300 c.c. is productive of as much good as the withdrawal of 500, 600 or 700 c.c. There is but little danger in the withdrawing of small amounts. Without being able to explain it, I feel convinced that the good which follows this procedure in certain cases is undoubted.

DR. T. B. GREENLEY, Meadow Lawn, Ky.—In severe cases of pneumonia, in olden times, when patients would be suffering with pain in side, difficult breathing, with rapid pulse and high temperature, the withdrawing of 15 or 20 ounces of blood would greatly modify these symptoms, rendering the patient much more comfortable. In those days the mortality did not exceed more than 10 per cent., but now fully 20 or 25 per cent. die. I think, in many cases of this disease, the restoration of the lost art would prove beneficial. I observed in the mortality reports in the city of Louisville last winter more cases of pneumonia died than those from tuberculosis.

BLOOD-LETTING AND BLISTERING IN THE TREATMENT OF PNEUMONIA.*

JAMES TYSON, M.D.
PHILADELPHIA.

There are two periods in the course of a croupous pneumonia in which blood-letting may be of service; first, in the early stage for the relief of pain and dyspnea, and second, in an advanced stage where there is engorgement of the right heart, also associated with intense dyspnea and general venous stasis.

No remedy is so efficient for the first object as blood-letting by the application of cut cups. Poultices, counter-irritation by the various measures commonly employed and even full doses of morphin hypodermically, are comparatively valueless as compared with wet cupping. Full doses of morphin produce temporary relief, but it passes away as soon as the effect of the drug wears off. No one who has not seen the happy result of such a bleeding can realize it. Venesection at the arm is less efficient, although it, too, relieves engorgement and diminishes pain and dyspnea. By no means every case of pneumonia, however, demands such treatment, and it is especially the cases associated with pleurisy—pleuropneumonia—in which it is indicated and is of such signal service.

The second period in which blood-letting is of service in pneumonia is, as stated, the advanced stage, where there is engorgement of the right heart, which is unable to unload itself of its burden, because the lung is already gorged with blood which it in turn can not get rid of.

The symptoms of this condition are an intense dyspnea, the breathing rate being often 50 and more, the breathing itself labored and shallow, the lips and face and even the general cutaneous surface dusky, and the pulse frequent and its volume feeble. No situation is more exacting of good judgment and decision than that described. Many physicians do not arise to the occasion and allow their patients to perish. I am afraid there have been occasions in which I have been wanting. Some of the failures to take advantage of opportunity may be due to the modern fear of blood-letting, which is as exaggerated as was its abuse, seventy-five years ago. With our present conservatism as to blood-letting it is scarcely possibly to do harm, and some opportunities to do much good are lost.

Blood-letting under these circumstances, and when I say blood-letting I mean general blood-letting, or venesection, is more efficient when associated with hypodermoclysis of normal salt solution and with oxygen inhalation. Hypodermoclysis alone, although of recognized value in cases of collapse from hemorrhage and after various surgical operations, can not be expected to be of advantage in such a state of pulmonary engorgement as that described. Indeed, I regard it as harmful because it must tend to overload the right heart, increase its embarrassment and possibly stop its action. After a blood-letting, however, the absorption of the fluid infused is more rapidly carried on, the toxins are diluted and eliminated in the urine and sweat, and in favorable cases the pulse improves and its rate diminishes, while the breathing becomes deeper, less frequent and less labored. I fear the accident referred to occurred in one case in my own practice, not a case of pneumonia, but of Bright's disease. The indication of mischief is sharp accentuation of the pulmonic sound.

The simultaneous inhalation of oxygen is an undoubted comfort to the patient, whatever be its influence toward cure of the disease. The lips become brighter red and the breathing becomes deeper and less labored. Dr. Clement B. Penrose, Baltimore, who has especially called attention to the combination of these three methods of treatment, says the patient is rendered much more susceptible to the influence of oxygen by the hypodermoclysis, especially if the oxygen be passed through a wash-bottle containing hot water to which has been added a teaspoonful of mixture of creasote and turpentine, each one part, and compound tincture of benzoin two parts. Dr. Penrose has also added a funnel to the oxygen apparatus, so arranged that the patient may inspire from it instead of through the tube introduced into the nostril.

These include the conditions in which I believe blood-letting may be found of service in the treatment of pneumonia. I do not claim that they are frequent in occurrence, but that they do occur I am confident, and believe also that by bleeding thus employed much suffering may be averted and a few lives saved.

As to blistering in the treatment of pneumonia, it is of limited advantage. It may be of service in connection with delayed resolution which is not due to a tubercular pneumonia. In the acute stages of pneumonia it is of no value.

DISCUSSION.

DR. EDWARD F. WELLS, Chicago—I would have liked to have heard more stress laid on the reasons for venesection, over and above those given by the lecturer. When the toxin of the pneumococcus was first brought to the notice of the profession, we became acquainted with its most poisonous effects; it causes a profound chill, a rapidly developing fever, and paresis of the capillary circulation. It would seem at this point that

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Materia Medica, Pharmacy and Therapeutics, and approved for publication by the Executive Committee: Drs. A. W. Baer, A. B. Lyons and W. J. Robinson.

danger is most likely to creep in; the system may be overwhelmed by the intoxicant. The quantity of toxin in the blood may be the reason for resorting to venesection in the stage of hyperemia. It would seem reasonable to think that the greater the amount of lung involved, the more active would be the pneumococcus and the greater the quantity of toxin would be thrown into the circulation, and the more severe the symptoms would be. But this is not always the case. It seems as if a tolerance is set up at this time, but however this may be, we know that in the early stage, venesection is of the utmost value on account of the removal of the toxin. If we can take away, say the twentieth part of the blood of the body, and supply its place indirectly with normal salt solution, we diminish the amount of toxin and thus remove a source of danger. It will not be successful in all cases, because in some the last added portion of the pneumonia toxin is simply the last straw that turns the scale against the patient. I agree, however, with Dr. Tyson that this expedient will save life in a large proportion of cases.

DR. SOLOMON SOLIS COHEN, Philadelphia—Statistics have been published by men of high standing and by others not so great, of hospital patients treated for pneumonia, which seemed to prove that for the last hundred years the mortality of pneumonia, under all forms of treatment, has remained about the same—about 25 per cent. in hospitals—no matter what the treatment, or with no treatment. It should be remembered, however, that the given patient is something more than a mere unit in a column of statistics. I am convinced of the value of our therapeutic measures in pneumonia. I have seen lives saved by saline infusions, by venesection, by oxygen inhalations and by the combination of these measures, which I have been using for the last ten or twelve years, when indicated in the individual case. I have had opportunities of witnessing and of exhibiting to my classes many remarkable results, some of which are on record in published clinical lectures. I am sure that I have seen patients recover who, under the older methods, would have died. I have come to the conclusion that bad results in hypodermoclysis are often directly due to the use of a needle of too large a caliber and the consequent too rapid injection of the solution. I have found it best to use needles of moderate caliber and to inject the saline solution rather slowly. I prefer to inject from four to six or at most eight ounces subcutaneously in the course of twenty to thirty minutes, and this may be repeated several times in the day if necessary. This method is better than to give one large injection daily, as is usual. The mechanical obstruction to respiration, by the condensed lung, is the least source of danger to the patient. This is shown by the fact that after the occurrence of the crisis there is a marked change for the better in all the symptoms, without sufficient change in the physical condition of the lung to account for the improvement. The great danger is toxemia, which is the indication for venesection and hypodermoclysis. Venesection in the later course of the disease may be useful to relieve the right heart of the load put on it by the consolidation of the lung. Oxygen by inhalation will compensate when necessary for the respiratory loss caused by the pulmonary consolidation. It supplies condensed respiratory pabulum, thus reducing the work of the sound lung.

DR. HENRY BEATES, Philadelphia—In the emergency arising during the course of pneumonia, where the remedies referred to are necessarily employed, value attaches to the order in which they are used. This is exceedingly important. First, it is evident that death usually results under these conditions, because the heart is unable to carry the circulatory load, and therefore, with the venous side distended and the heart laboring, it is absolutely necessary to resort to prompt venesection. This not only diminishes the volume of blood in front of the heart, but, at the same time, gets rid of much of the toxin. The hypodermoclysis of normal salt solution should be carried on at the same time that phlebotomy is in progress, for physiologic reasons.

DR. W. W. TOMPKINS, Charleston, W. Va.—There is a marked difference in pneumonia between patients living in the country and those living in cities. The former are more likely to be benefited by venesection than the latter. Personally, I have had only one experience with venesection in the treatment

of pneumonia. It is a method which I will hold in reserve and use in suitable cases. Dr. Fenwick of London, England, exchanged practice with his son. The son was in the habit of bleeding his country patients and with good results; when he came to London he used the same practice, but with fatal results. In this particular series of cases it demonstrated that in a rural and country district, where the patients lead out-of-door lives, it was good, but in crowded London it was bad. This demonstrates that one class should be depleted, the other sustained and strengthened. All of which goes to prove that environment has much to do with the method of treatment.

DR. TYSON—The fact that the removal of blood in the first stage of pneumonia also removes a certain proportion of toxins with it, is undoubtedly true; but the toxic danger is not so great in the early stage as it becomes later. There is no doubt that, even in the early stage, there is a certain amount of danger from the action of the toxin. I agree with Dr. Cohen as to the caution to be observed in performing hypodermoclysis. This caution, giving small quantities several times a day of the salt solution, I have always observed in cases of uremia, where no immediate danger threatens the patient and there is more time for the application of remedial agents. My intense desire to give relief quickly led me to give the saline solution, without waiting to perform venesection, and governed my treatment; whereas bleeding might have been resorted to with safety and followed by the salt solution, and possibly with much better result.

THE DRUG TREATMENT OF PNEUMONIA.*

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Croupous pneumonia is an affection of a dual nature: it is an acute specific fever, and at the same time an acute inflammatory disease of the lung. In formulating a rational treatment the dangers arising from each of these processes must be given due consideration. It is a well-established fact that the chief danger lies in the toxemia. The severity of this toxemia is dependent on the virulence of the infection and on the degree of reaction in the individual attacked, but it bears no relation whatever to the extent of lung involved. Cardiac weakness also contributes largely to the mortality of croupous pneumonia. In some instances this appears to result mechanically from the impediment offered to the circulation by the consolidated lung; more often, however, it is simply one of the local manifestations of the systemic poisoning. Complications, for the most part unpreventable, are the immediate cause of death in not a few of the fatal cases. Thus, endocarditis, pericarditis and meningitis are not infrequent; but as these affections are associated with the *Micrococcus lanceolatus*, any mortality that is due to their development must be credited also to the general infection. Finally, in rare instances, asphyxia caused by diminution of the respiratory surfaces is the chief factor in bringing about a fatal termination.

VARIOUS SO-CALLED SPECIFICS.

In view of these facts it is evident that any treatment to be really successful must be aimed at the infection itself or its resulting toxemia. Fortunately, in the majority of cases but little assistance is required of the physician, as Nature furnishes her own antidote so abundantly that the disease, after running a definite course, ends in complete recovery. In many cases this tendency to spontaneous resolution is so pronounced that it is not offset even by the most inappropriate drug-

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ging; on the other hand, the infection is at times so overwhelming in its virulence that death results despite the very best directed efforts. To-day one seldom hears of pneumonia being aborted by the timely use of veratrum viride. While this drug is undoubtedly of value as a circulatory sedative in certain phases of the disease, it is difficult to believe that it has any power in hastening the occurrence of the crisis. Under its use I have occasionally seen the temperature fall to normal in three or four days, but this has occurred quite as often under an expectant plan of treatment.

The treatment of pneumonia by large doses of digitalis, originally proposed by Petresco of Bucharest, has never had many advocates in this country. In 1894 Petresco reported 1,192 cases treated by this method with a mortality of 2.66 per cent. But the author himself states that the treatment is not applicable to very grave cases, and that his observations were made in a military hospital on young and robust men. Petresco's figures lose much of their significance when we compare them with the death rate in the German army, which, according to Osler, was only 3.6 per cent. in 40,000 cases of pneumonia among healthy picked men.

Aufrecht, in Nothnagel's Special Pathology and Therapy, ardently advocates the hypodermic administration of quinin—8 grains, once or twice a day—not as an antipyretic, but as a specific remedy. According to Petzold¹ the mortality under this treatment in 261 patients treated in the Altstadt Hospital of Magdeburg was 8.8 per cent., but we learn from Strusberg² that in the medical clinic at Bonn during the same period the mortality under symptomatic treatment was only 7.97 per cent. I have used the carbonate of creosote, which has been so highly extolled by Van Zandt and Weber in 9 cases; of these 2 died. The daily dose was from 40 to 60 minims. While no untoward effects followed its use, in no instance was the crisis hastened by the drug or were any of the symptoms of the disease appreciably influenced by it.

SEROTHERAPY.

Of all the specific treatments that have been recommended for croupous pneumonia that by antipneumococcic serum was the most promising. It aimed directly at the essential factor in the mortality, the toxemia. Perhaps sufficient time has not yet elapsed to warrant a final opinion on this treatment, but certainly those who have given it a fair trial will admit that it has fallen considerably below their expectations, and that it has yielded results in no way comparable to those obtained in diphtheria from the use of antitoxin. In a very fair test made by Dr. James C Wilson³ in the German Hospital of Philadelphia the mortality in one series of 18 cases was 22.2 per cent. and in another series of 18 cases 35.3 per cent. Sears⁴ of Boston has recently reported a series of 12 cases with a mortality of 25 per cent. The results obtained under these so-called specific treatments coincide so closely with those that have often been obtained under symptomatic treatment, and have been so variable in the experience of different observers, and even in the experience of the same observers working at different periods, that we are forced to conclude that the figures do not indicate any relation whatever between the remedies employed and the mortality reported. If such statistics possess any value it is in emphasizing the fact, well known but often forgotten, that the mortality of croupous pneumonia is

exceedingly variable, fluctuating between 4 or 5 per cent. in the young and robust and 75 or 80 per cent. in the old and debilitated.

GENERAL EXPECTANT TREATMENT.

Although we have yet no specific remedy, much may be done in the way of symptomatic treatment to avert a fatal issue. In a large number of cases no drugs are needed. By confining his services to the careful supervision of the sick room, to the selection of nutritious but easily digestible food, to the recommendation of appropriate external applications, and to the critical study of the symptoms from day to day, the medical attendant will as conscientiously discharge his duty to his patient as he will by systematically prescribing drugs, which, even if they do no harm, can not possibly be of benefit. Until we come into possession of so powerful a weapon as is quinin in malaria, as antitoxin in diphtheria, or the salicylic compounds in rheumatism, our position in regard to the treatment of pneumonia had far better be one of armed defence rather than one of heroic aggressiveness.

The symptoms that most often demand individual attention are the pain, cardiac weakness, cough, fever, dyspnea, insomnia and delirium. If the pain be severe and fail to yield to local remedies, morphin should be given hypodermically or Dover's powder by the mouth. This treatment will serve also to subdue the restlessness and anxiety that often mark the onset of the disease, and which, if allowed to continue, tend to augment the exhaustion.

THE CARDIAC SUPPORT.

The most important indication in the symptomatic treatment of croupous pneumonia, and the one most difficult to meet, is to counteract the cardiac weakness. Alcohol is regarded by most clinicians as the best stimulant. The question whether this drug is a food or a poison need not be discussed here. If its reputation as a useful stimulant in croupous pneumonia and similar infections has not been fully established by the accumulated testimony of the past fifty years, then surely "experience is fallacious and judgment difficult." Often it is not required, but when the pulse becomes compressible and dicrotic, and the second sound at the pulmonary area loses its force, it should be given freely. The patients who need it most are the old, the debilitated and the alcoholic. Often three or four ounces of good whisky in the twenty-four hours will suffice, but in some instances two or three times this amount may be given with advantage. I know of no better rule for administering it than that laid down by Brunton: "Sit by the side of your patient for a while and watch him after the administration of a dose of alcohol, and if you find that the alcohol brings back the various functions nearer to the normal, then it is doing good; if the functions of the organs diverge further from the normal after the administration of alcohol, then it is doing harm."

After alcohol our thoughts naturally turn to digitalis. While this remedy is undoubtedly useful in some cases, its action is uncertain and often disappointing. In my experience it has been almost invariably badly borne when administered for the irregular flagging pulse of the period immediately following the crisis. Its frequent failure at other times may be explained by the fact that the cardiac insufficiency in the majority of cases is not dependent on simple dilatation or relaxation of the ventricles, but on degenerative changes in the myocardium, or perhaps, in some instances, on disturbances

1. Aert. Centralzeitung, 1900, No. 13.
2. Therap. der Gegenwart, November, 1900.
3. Therapeutic Monthly, July, 1901.
4. Boston Med. and Surg. Jour., Dec. 12, 1901.

of the motor ganglia of the heart, brought about by the infection. Often no gross lesions are found postmortem in the heart when there have been during life most pronounced symptoms of circulatory failure; moreover, the symptoms of cardiac embarrassment often disappear on the occurrence of the crisis, even though the consolidation in the lung still persists. Mechanical distension of the right ventricle undoubtedly does occur in some cases. It may be recognized by the enlargement of the area of cardiac dulness, by the marked cyanosis, the orthopnea and the small pulse. In this condition digitalis, by driving the blood with greater force against an impassable barrier, is likely to do harm; it is better to relieve the strain on the right ventricle by judicious venesection.

As a circulatory stimulant, strychnin generally proves more efficacious than digitalis. It should be given in ascending doses from 1/60 to 1/15 of a grain, careful watch being kept for the appearance of any untoward symptoms. In order that there may be immediate absorption large doses should always be given hypodermically. Caffein is a useful adjunct to strychnin, but, of course, it should not be used when there is cerebral excitement or insomnia. In threatening collapse I have found no stimulant so generally serviceable as camphor. It is especially useful in tiding the patient over the profound depression that often accompanies or follows the crisis. It is available also when pulmonary edema arises as a complication, and in this condition it may be advantageously combined with atropin. To secure the best results camphor should be given hypodermically, dissolved in ether or sterile olive oil, in doses of from 1 to 2 grains every two or three hours. In the absence of pulmonary edema subcutaneous saline infusion may be tried for its effect on the heart and the secretions; personally, I have never seen any definite good follow its use in pneumonia.

REMEDIES FOR COUGH, FEVER AND DELIRIUM.

The cough varies considerably; in many cases it is not sufficiently troublesome to require any special attention; on the other hand, it may be the most distressing symptom of the disease. For the hard, dry cough, especially of the first stage, no remedy is so useful as opium in the form of Dover's powders. Expectorants are rarely needed. The inflammatory exudation in the air vesicles is removed almost entirely by absorption, and to attempt its expulsion by means of drugs is useless. When, however, there is a good deal of bronchial catarrh with much viscid sputum, ammonium carbonate may be given to facilitate expectoration, but it should be withdrawn immediately if it cause any disturbance of digestion.

It is difficult to determine how far the fever itself is responsible for the disturbance of nutrition, but the fact that in a very large proportion of the gravest cases the temperature is not high indicates that the chief factor in bringing about the exhaustion is not the fever, but the toxemia. This being the case, and as the febrile period is generally of a comparatively short duration, the temperature is better disregarded entirely, or if treated at all, reduced by means of cold or tepid sponging. Experience is strongly against the use of such active antipyretics as antipyrin and phenacetin. By favorably influencing the pulmonary circulation, drugs that are employed in counteracting cardiac insufficiency are also of service in relieving the dyspnea. Naturally, the circulatory stimulants that are also respiratory stimulants, like strychnin and caffein, are the most useful. Oxygen makes the breathing easier, lessens

cyanosis and conduces to sleep, and to this extent aids in conserving energy.

When insomnia and delirium are sufficiently severe to demand the use of drugs, morphin will generally be found the most efficacious. It is generally conceded that this drug is useful during the first two or three days of the disease in relieving pain and in subduing restlessness, but many clinicians condemn its use in the later stages of pneumonia, contending that it depresses the respiration, checks secretion and paralyzes the bronchi. Waiving theoretical objections, I have often used it with the greatest satisfaction in quieting delirium and in securing sleep. Sometimes the invigorating effects of a few hours of sleep secured by a single injection of morphin are truly remarkable. Of course, morphin should not be used when there is extreme dyspnea or when there are evidences of pulmonary edema. Next to opium I prefer chloral. Doses of from 10 to 15 grains are rarely followed by an appreciable circulatory depression, especially if given in conjunction with digitalis.

Delayed resolution is a troublesome complication. Fortunately it is of rare occurrence. In the few cases that I have personally treated resolution has ultimately taken place under repeated blistering and the free use of tonics. Riess has recommended injections of pilocarpin and Dieulafoy, Forbier and Lepine the production of aseptic abscesses by means of turpentine injections, but with these methods of treatment I have had no personal experience.

DISCUSSION.

Dr. W. J. ROBINSON, New York—Although, generally speaking, I have the highest respect for the opinion of Professor Klemperer of Berlin, who introduced the serum treatment for pneumonia, I have no hesitation whatever in saying that the antipneumococcic serum is perfectly useless in the treatment of pneumonia. I base this opinion on the fact that pneumonia is not due to a single bacillus and the danger is not due to a single cause; and, therefore, it is not suited to specific treatment. But it is not only theoretically objectionable; clinical experience has shown it to be followed by bad results. Several fatal cases have been reported. There is no analogy whatever to the use of antitoxin in diphtheria, because in this disease the danger is from a single cause. At present the rage for serums for all diseases is only a fad and is not destined to last long. The value of drugs is difficult to weigh in self-limited diseases, and when the case recovers it is difficult to say whether any given drug has been of value or not. As regards the use of drugs in pneumonia, my own impression is that creosote and its derivatives give the best results. The administration of hydrogen peroxid has been recommended on the theory that it would become decomposed in the stomach and would yield oxygen to the blood. I have not myself been able to obtain any results from its use.

Dr. E. F. WELLS, Chicago—I have little confidence in the statistics of pneumonia as bearing on mortality under different modes of treatment. I collected statistics of nearly four hundred cases of pneumonia, some years ago, and found that most of the cases reported in medical journals had been published for the purpose of bolstering up some special method of treatment. We can see the fallacy of statistics when the unfavorable cases are not reported. On the other hand, we have statistics from hospitals dealing with a large number of cases, and in which a very large proportion die. The unreliability of deductions from such statistics is shown by the great difference in mortality in different groups, the rate varying from 3 to 95 per cent. Hospital statistics and cases published in the journals must be set aside as of little value for our purpose. With regard to the relative mortality in the robust and delicate patients, my experience in this matter has been different from that of the reader of the paper. I have observed that it is the robust and not the delicate subjects that are more likely

to drop off suddenly, while the weak are more likely to recover. As regards the means to be adopted for the relief of pain, their value is difficult to determine, as the pain in pneumonia is of short duration and usually ceases spontaneously within three days' time. If one gives a little morphin and the pain disappears in a few hours, he is apt to ascribe the relief to the drug, whereas it may not have been necessary, as the pain would have subsided without it. In cases of edema of the lung in pneumonia, do not forget the expedient of raising the foot of the bed, so as to enable the serum to flow out of the bronchial tubes.

One of the speakers said that pneumonia can not have a specific treatment because it is due to different germs and not due to a single cause. I, on the contrary, believe that pneumonia is the disease of all others, in which the authorities are agreed as to its cause, and that it is due to only one bacterium and that is the pneumococcus. One of the most remarkable effects of the pneumococcus on the human system is that its invasion is generally accompanied by a leucocytosis. It is when we have the initial chill that we find the notable increase in the leucocytes; it may be to treble the proportion found in healthy blood. This seems to be the natural means of resistance set up by the system to protect it from the pneumococcus. Whether or not we are doing the right thing in contracting the capillaries by giving digitalis at this time; or whether or not it would be better to give salicylic or nucleinic acid, which increases the number of the white blood-cells, is sometimes hard to decide. We know much about the pathology of pneumonia, but still have something to learn about its treatment.

Dr. H. C. WOOD, JR., Philadelphia—I would urge discrimination in the application of remedies; to treat the patient and the pneumonia is the safe rule to follow. I take exception to the statement of Dr. Cohen that the fact that the statistics for the last fifty years show no improvement in the results of treatment of pneumonia is to be disregarded. There is no proof our results in pneumonia are much better than those of fathers. We have no specific for pneumonia. The disease is of short duration and having no specific, the physician must be content with observing the symptoms and watching the course of the disease, guiding his treatment accordingly. If the temperature goes up, he gives a cold bath, or an antipyretic; if the heart becomes weak, he gives cardiac stimulants, and so on. We can watch the symptoms in pneumonia; but have very little knowledge of how to overcome them. If the heart is weak we give strychnia, forgetting that it is not the left heart that is giving out, but the right heart. It is a fact that we know very little about the effect of drugs on the right side of the heart. We do know, however, that, of some drugs, the effect on the two sides of the heart is different. For instance, nitroglycerin acts differently on the right side of the heart and on the left side. We really can do very little until we can settle this point. In my opinion, with the single exception of venesection, we have no remedy or method of treatment of unquestioned value in the treatment of pneumonia.

Dr. JOS. M. PATTON, Chicago—I can hardly agree with the last speaker that we know nothing about the treatment of pneumonia, for, in fact, we do know about some things that we can do with success. In a patient where we have one whole lung to carry on its functions, and the right side of the heart is not overloaded, about the only real danger to be feared is the toxin. As regards the drugs used, the continued administration of digitalis may be objectionable, through its action on the left side of the heart on which there is no strain. Strychnia does good because it equalizes the circulation better than any other drug. In fact, in pneumonia I have obtained the best results from large doses of strychnin better than from any other drug. With regard to alcohol there is a difference of opinion. I have personally very little confidence in its beneficial effect, except at the approach of the period of crisis, when it may occasionally be given with advantage. I have not seen any good result from its continuous administration. As to the antipneumococcic serum, I have not arrived at the conclusion that it is absolutely useless. It may prove to be worse than useless, but its position is as yet undetermined. We have reason, however, to expect that something may come out of it in future. The mere introduction of the aspirating needle into

the lung may, of itself, in cases of delayed resolution, do good by setting up a certain amount of irritation.

Dr. THOMAS F. REILLY, New York City—The outlook in any case of lobar pneumonia depends largely on the condition of the kidneys. In the very young the kidneys are almost always in good condition and the mortality from this form of pneumonia is practically nothing. It is rare to find perfectly sound kidneys in anyone after fifty years, and hence the mortality is very high. The kidneys of alcoholics are generally diseased and are unable to throw off the poisons and, as a consequence, the disease is generally fatal. The value of the saline injections spoken of is due largely to the diuresis that follows their use. With regard to the means to be employed to afford relief from pain, I have found much value in the topical application of the combination of moist clay, glycerin and aromatics, which is put up by several supply houses and can be put up by any druggist. The employment of exploratory puncture in two cases of pneumonia with delayed resolution succeeded in materially hastening resolution.

Dr. A. B. LYONS, Detroit—With regard to the mixture of glycerin and some base like kaolin, I think that if venesection will do any good by abstraction of blood, surely the application of glycerin will do good in the same manner. My own experience has impressed me very strongly in favor of this method of medication, and this form of relief especially. As yet there has been no official preparation of this kind, but we all know what it is: It is a preparation of glycerin, and we know that it is the effect of glycerin to draw moisture to itself, and when applied to the skin it draws serum from the blood, very much on the same principle as the use of a blister.

Dr. H. H. BUGGS, Asheville, N. C.—When I began the practice of medicine, in 1860, a book had just been published by J. Hughes Bennett of Edinburgh, which gave statistics of cases of pneumonia, in hospitals of Paris and elsewhere, in comparison with other cases treated by himself. The proportion of deaths under the usual treatment at that time with venesection and depressants, was about 33 or 34 per cent.; under the expectant treatment, in which nothing was done except to look carefully after the welfare of the patient, there was a mortality of only 23 or 24 per cent.; while under Bennett's supporting treatment the deaths were only 3 or 4 per cent. This coincides very closely with what Dr. Wood said; it is not so much the medicines that are used, as it is the care of the patient, which gives the best results. As shown by Bennett, even the expectant treatment showed much better results than the treatment generally pursued in those days. The principal object of Bennett's treatment was to support the strength, to watch the case, to take care of the secretions, to keep the patient quiet, and to see that he was never awakened unnecessarily. The results of his treatment were satisfactory and I am not aware of any statistics which prove that the treatment at the present time is any more successful than Bennett's. No specific has been found and until this has been done, there can be no better treatment. The important things are to take care of the secretions, to support the heart, to give suitable nourishment, and do the best to sustain the strength of the patient until the disease runs its course, which will usually be in a week.

Dr. W. W. TOMPKINS, Charleston, W. Va.—For a number of years I have been in the habit of going about among the medical men in the colleges and hospitals in order to take notes of different methods of treatment. I found in Baltimore, Philadelphia and New York that pneumonia was treated with different remedies, and when I returned at other times, they had changed to other remedies. I deplore a tendency to depend on special medicinal agents in the treatment of pneumonia. Personally, I believe that the only safe thing to do is to treat each individual case of pneumonia according to its special needs. I think that as regards the influence of age on mortality, the more advanced in life the cases are, the more likely we are to lose them. I urge especially the importance of looking after the heart's action and the careful nursing of the patient. When a patient with acute pneumonia gets well, the doctor is fortunate and the patient is more fortunate. I do not approve of cough syrups and mixtures, as they derange the digestion, and this causes a loathing for food. Keeping up the strength

of the patient by proper digestible and easily assimilable food are as potent factors in a cure as are drugs.

DR. HENRY BEATES, Philadelphia—I wish to ask Dr. Wells what type of leucocytosis he has found.

DR. WELLS—The ordinary form of leucocytosis occurring in pneumonia. I have found it within an hour of the onset of the attack. At the same time, or earlier, the eosinophiles are reduced in number, and in the course of a few hours are driven out of the circulation. It is at this time that the multinuclear cells, as motile secreting glands, are engaged in battle with the toxins of pneumonia. I look on this condition as of special interest and as not without diagnostic importance.

DR. STEVENS—In view of the obstacles in the way of the successful cultivation of the pneumococcus in artificial media I have grave doubts as to the genuineness of much of the serum sold as antipneumococcal serum. In reply to the question about hydrogen dioxid I have had no experience with it. I think that too much stress has been laid on the condition of the right ventricle of the heart. The chief danger lies not in the strain to which the right ventricle is subjected, owing to the mechanical obstruction in the lung, but in the toxemia which attacks the heart as a whole. As to the blood-count, I think it is a mistake to put too much stress on leucocytosis in the matter of prognosis. A marked leucocytosis does not always mean good reaction, nor a slight leucocytosis poor reaction. I believe, however, that hypoleucocytosis is to be regarded as an unfavorable sign. Of 11 cases with pronounced hypoleucocytosis that have come under my observation only one recovered.

(This symposium on pneumonia will be concluded next week by the article by Dr. E. Fletcher Ingals on "The Prognosis and Treatment of Groupous Pneumonia, with an Analysis of the Cases Treated in Cook County Hospital for Fifteen Months Preceding April 1, 1902," with the discussion thereon.)

EXPERIMENTAL RESEARCH ON THE HEART OF THE DOG.

WITH REFERENCE TO CARDIOTOMY AND CARDIORRHAPHY.*
BENJAMIN MERRILL RICKETTS, Ph.B., M.D.
CINCINNATI.

Nothing indicates more clearly the lack of confidence in surgical intervention in lesions of the heart than that they have been treated as anomalies. The best history of the surgery of the heart accessible to the general reader is to be found in a work that treats of anomalies and abnormalities. They of themselves show that the heart is more susceptible to injury, disease and surgical operation than generally supposed. Simple puncture with a needle was at one time thought to result in instant death; indeed, such thought generally prevails at this time. Infection in animals is more likely than in man because of the great difficulty in making them sterile and keeping them so after they have been operated on.

If experimental physiology and surgery has taught anything, it is to reason by analogy from animal to man. Animal experimentation has led the way to more successful surgical work and it will continue to do so. It not only shows what can be done, but it teaches by manipulation alone, if nothing more, how to do it.

There are many diseases and many lesions which do not manifest themselves or cause symptoms, which are readily discernible. In other words, the particular lesion is wholly unsuspected until it has advanced far enough to produce functional disturbances, which are often serious. Then search is made for the cause. Then, again, it is possible to diagnose certain diseases only by

the symptoms, caused by the functional disturbance produced by the lesion, and not by the lesion itself. The functional disturbances resulting from a given lesion are not always the same.

Pathologic physiology receives only scant attention or none at all in our medical schools, yet it is of the utmost importance. Only a few works on this subject are accessible, and these are unsatisfactory in some respects. Many questions of the utmost importance are unsettled. These remarks apply with peculiar force to the heart. The intimate connection of the function of respiration with the heart and the disturbance produced in the functions of the other, when either heart or lungs is diseased, is the reason for taking up both the normal and pathologic physiology of the heart.

Aspiration of the pericardium should not be attempted owing to the dangerous consequences, such as injury to the coronary, internal mammary and intercostal vessels, and puncture of the walls of the heart itself; and also, the possibilities of infection from the escape of fluid through the puncture into the pleural cavity and mediastinal space. The probabilities are that in many cases in which fluid has been purported to have been aspirated from the pericardium, that the fluid was contained within the pleural cavity, mediastinal space, pulmonary cyst or abscess or a pleural cyst.

The heart is very susceptible to alkaline solutions, which accelerate it. The absence of stomata in the diaphragm within the pericardium is to exclude fluids from the peritoneal cavity. The pleural fluids will, however, pass through the pericardium. In the lower animals (fish) the pericardium and diaphragm are wanting. As they ascend in scale the pericardium becomes more fully developed to form the pericardial sac; the same is also true of the diaphragm.

There is no way of determining whether or not the heart will absorb to any degree any fluid that may be contained within the pericardium. Neither have such observations been made on the ability of the pericardium itself to do so. It has, however, been determined that the heart will not withstand a high degree of pressure from fluid or otherwise within the pericardial space. It will stand a greater pressure if the pressure be gradually increased as in the case of pericardial effusion, resulting from pericarditis. It will, in a normal state, absorb more or less of its exudate, and it will probably have a greater capacity to absorb in a pathologic state.

Pressure from any source may be sufficient to force a part, or all, of the blood out of the cavities of the heart. This may be gradual or sudden, fatality resulting only when functional circulation can not be maintained. The consequences are less severe and serious trouble delayed if the pressure is increased slowly, as by the growth of new tissue. Rapid pressure is usually due to change in shape of the chest from trauma, or from concealed hemorrhage within the pericardial, pleural or mediastinal spaces.

OPERATIVE TECHNIC.

Asepsis.—Sterilization of the local area of the dog is almost impossible. The area should be shaved after the dog has a thorough bath, which is difficult to give to tramp dogs, as they are not accustomed to it. A sterile sheet, in which there is a hole large enough to operate through, should cover the dog. Alcohol or turpentine is applied to the shaven surface, which is then ready for incision.

Anesthesia.—Ether should be employed in all cases for operation, and carried to complete relaxation and chloroform given to produce death.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.

Incision Through Skin and Muscles.—The incision should be made longitudinally, beginning at the third or fourth rib on the left side, and about one-third to one-half inch from the internal mammary and diverging slightly from the sternum down to the desired point, even to the apex of the heart. It may be extended to the attachment of the diaphragm and down to the costal cartilages.

The external soft tissues being divided are then reflected outward, great care being taken not to have the point of the knife slip into the chest cavity, as the heart, lungs or arteries may be injured.

Division of Cartilages and Bone.—Divide the third, fourth, fifth, sixth and seventh ribs, if necessary, great care being observed in opening the chest that bone spiculæ are not left to lacerate the heart during its pulsations, otherwise serious, if not fatal, laceration of its wall might ensue. Such an accident must be guarded against during the entire operative procedure. Great care must be taken to avoid such an injury to the pericardium also. It is, therefore, safer to completely sever the bony structures with a sharp cutting instrument than to fracture them by force or otherwise. The same precautions should be observed in dealing with the cartilaginous structures. If necessary, the cartilages may be cut near the left border of the sternum and retracted outwards to the right or left.

Mediastinum.—If the mediastinal space be opened the respiratory motion of the thin membrane that walls off the right lung may greatly interfere with rapid work. It will especially be so if overdistension of the right lung should rupture it. The right lung would then retract upon itself. It is, therefore, safer and less difficult if that space be not opened. The opening can, however, be closed with the hand of an assistant during the entire operation.

Hemorrhage.—The bleeding in the skin and muscle is seldom annoying. The intercostal arteries usually cease to bleed after they have been exposed to the air and sponge pressure; if not, they can be easily controlled by forceps. The internal mammary once wounded, the hemorrhage is great and troublesome to check, except in one way, namely, pull the skin to the right, having only the costal cartilage and muscles to constitute the chest wall, then with the finger, or a larger pair of acupressure or artery forceps, include all the tissues between the cartilages, just above the wound, in the forceps put on parallel to the long axis of the costal cartilage or in the transverse diameter of the chest. It may be necessary to do this above and below the wound, as the internal mammary artery may bleed a little from below, the anastomosis being rather free with the deep epigastric. After the hemorrhage has been checked it is best to apply a ligature *en masse*, as it saves time, which is an item with the heart exposed.

The first opening should give good view and room to work; if not, incise two inches to the left in the intercostal space and cut the ribs transversely with a pair of sharp bone forceps, beginning at the outer border of the incision in the intercostal space. If necessary, other ribs are divided so that a flap sufficiently large should be turned back to give ample room.

There is no occasion for using gauze or any kind of packing in heart injuries, much less so in pericardial injuries, as bleeding from the pericardium is insignificant except in cases of injury at the point of attachment of the extreme base of the heart; even then experiments show that hemorrhage from injuries to it are but slight. To secure beneficial results from gauze packing

in heart injuries it is necessary to employ firm pressure. To do this would interfere with the heart's action. Therefore, it would be more injurious than beneficial, because such pressure would force the heart back on the posterior wall of the thorax.

If a patient survives the immediate thrust of a stil-etto-like instrument, however small, the probabilities are that the hemorrhage will be less when the weapon is withdrawn at the end of several hours than on its immediate withdrawal. The styptic effect of the metal, as the result of coming in contact with blood, together with the formation of clots and the closing of the opening resulting from the puncture by allowing the weapon to remain, will be amply sufficient in a few cases to prevent a fatal hemorrhage on its withdrawal.

The blood that most resembles in constitution the blood contained in the cavities of the heart is that found in the coronary arteries which, like that in the heart, coagulates with wonderful rapidity.

The blood, after having made the round in the body, comes back to the heart practically exhausted of oxygen. It not only contains CO₂, but other chemical compounds formed by the debris collected uniting with the constituents of the blood. At the same time, it contains more fibrin and doubtless also more of the other elements which add to the coagulability of the blood, for in its course it has taken up the material prepared by the digestion process to repair the wear and tear of the body.

In all cases where important blood vessels were punctured, the observers were impressed by the rapidity of coagulation. It is very probable that Nature has so arranged that in case of trauma where there is hemorrhage of the more important organs, coagulation shall be more rapid than elsewhere, thus preventing death. It seems probable that the rapidity of coagulation is proportionate to the importance of the organ to the animal economy.

Contraction of a lung when the thorax is opened will cause congestion of the heart. The contraction of the lungs, whenever the chest is opened, exerts considerable pressure upon the various pulmonary blood vessels and thus forces a volume of blood, equal to nearly the entire volume of blood normally contained in the lung, into the already engorged heart, thus bringing about a congested condition of this organ.

Care should be taken in operations on the heart, as undue manipulation alone may cause death from paralysis of the vagi.

Opening the Pericardium.—Having checked all hemorrhage from the chest wall incision, and the wound being dry, lift up the pericardium with a tenaculum. Great care must be taken not to puncture the cardiac tissue or coronary artery. The tenaculum should be inserted over the ventricles, as there is danger of wounding the thinner auricular wall.

The incision should be made with its longitudinal diameter and may be extended to any degree necessary to facilitate rapid work and should be done by tearing. Each bleeding vessel must be closed as soon as opened. When the pericardium is incised it retracts, and owing to its thinness is almost lost sight of. It, however, can be replaced and sutured in position with a moderate degree of ease. The pericardium is normally completely filled by the heart, and when the heart is beating and not even restrained by the chest wall, its range of movement is very great. This must be seen to be appreciated.

The pericardial cavity is now cleared of all clots by one sweep of the finger, if possible. Gauze may be carefully wrapped around the finger, but it is best not

to use it. Pericardial adhesions increase danger of operations.

Treatment of the Heart.—The heart is gently grasped in the palm of the left hand, great care being taken not to use any more pressure than is absolutely necessary to enable the needle to be plunged through the wall of the incision.

The heart can be handled to a remarkable degree without any appreciable change in beat, except the dilatation caused by the loss of the supporting sac—the pericardium. This handling of the heart holds good, provided not too greatly prolonged. The loss of support of the chest wall and, more important, the close-fitting pericardium, causes a great extra strain on the myocardium.

Careful inspection of the naked heart shows its great distension, and when it seems or really is paralyzed by over-distension; holding together, for a moment, the wound in the chest wall, will cause the heart to regain its normal action. The operation may now be continued. If necessary, this may be repeated several times during the operation. The heart-operation being finished, it is returned to the pericardial cavity, the pericardium now being brought into position with small tenacula, a running suture of catgut is placed in it.

As the artery tension is not so great when the chest wall is closed, a suture can be used that need not last so long. The pericardium tends to go back in place after the replacement of the heart. There was a plastic pericarditis in all the autopsies, and the pericardium was adherent for a variable distance around the incision in the pericardium, from half to one inch.

In most cases the pericardium was not sutured and the result was very good as to replacement. So good, that in any case in which there is danger in prolonging the operation, one is justified in allowing the pericardium to remain open, for the closing of the wound tends to keep the heart in place and keep the pericardium closed.

Ventricles.—This same work does not so well control the hemorrhage in wound of the left ventricle, as the wall is very strong and resilient; however, this method is the best and most convenient, and it is always easy to govern the degree of pressure, which should be only great enough to prevent blood from coming out during systole, and in diastole the pressure should be slightly relaxed.

As to putting the needle through during systole or diastole, I think that will be forgotten when it comes to the work, as with a heart bounding and changing position at least one-half to one inch seventy to one hundred times a minute, we are glad to get a needle within one-quarter inch of the mark aimed at.

Auricles.—When the right auricle is opened, naturally the blood comes out with considerable force, but this can be entirely controlled by putting the ball of the finger over the opening, yet the force does not have to be great enough to obliterate the auricle or press the walls in contact. The pressure can be accurately gauged in this way, and it controls the hemorrhage almost perfectly.

Suturing the Heart.—This is very essential. Should a needle not be ready, the finger can be kept in place while a well-curved needle is passed from one side to the other under the finger. The needle should be long and a half-circle, but not heavy. Theoretically, to insert the needle in diastole is right, but it is one part of theory that we lose sight of in the critical moment, and should the heart cease to beat for a few seconds to a

minute, or even two minutes, which it does, our duty is to keep the finger on the heart wound and close the wound in the chest by seizing its edges, keeping the finger in position. Then, if the heart resumes its beat, further effort can be made to close; if not, the work is finished anyway.

The question as to whether to continue work even though the heart stops is an open one. On one side we have the very great advantage of a quiet tissue to work on, which will be positively frightening when it comes so suddenly, and on the other the less chance or probable less chance of resuscitation, if we keep the chest open. We should choose the lesser evil if we can sometime decide which really is best.

In suturing the heart tissue the organ should be held as securely as is consistent with minimum pressure and suturing done as rapidly as possible, knots being made by an assistant. Glover's continuous suture is preferable to all others, because fewer and less complicated knots are required. This is especially desirable when silk is used, the object being to get rid of knots by absorption as quickly as possible.

The simple continuous suture without knotting, except in the first and last punctures, would be ideal but for the great danger of the suture breaking, and thus allow reopening of the wound. This is the great danger in using absorbable or non-absorbable material, as they must of necessity be very light. Both silk and kangaroo tendon have been used with great satisfaction in suturing, penetrating and non-penetrating wounds of the heart, also for ligating the coronary arteries at various points. However, the preponderance of evidence is in favor of the interrupted suture, and that it should be twisted silk. Even though kangaroo tendon is more absorbable, wounds of the heart repair themselves as rapidly, if not more so, than other tissues, and the pericardial adhesions are proportionate to the extent of injury, whether clean or infected.

Interrupted sutures should be used, and the needle and silk should be as small as will render service. They should be about one-eighth of an inch apart, and taken deeply into the tissue. If the cavity of the heart has been opened the needle should be made to pass through the entire thickness of the heart's wall. If the endocardium has not been punctured, the needle should be made to traverse the floor of the incision. The strength of the suture material should be determined at the time of operation. Knotting of the sutures should be firmly secured and their respective ends about one-quarter of an inch in length. If shorter, the constant action of the heart may possibly untie them.

Kangaroo tendon has been used in suturing muscular tissue of the heart and ligating the coronary arteries with considerable satisfaction, more especially in ligating the coronary arteries. Its life will depend on the size and quality—the greatest objection being to its size. A large needle is required and the punctures from it must necessarily be larger than when silk is employed. Catgut offers the same objections.

It is pretty well agreed on by experimenters that the sutures should be applied during systolic relaxation, that the cut edges may be perfectly coapted. However, Rhen tied them during diastole with equal success.

It is not necessary to suture or apply any kind of treatment to some wounds of the heart; they will close and recover spontaneously. It is impossible to say or determine the size of wounds necessary to be sutured, or to be let alone, except from continuous bleeding, which can only be determined by opening the chest. It must

necessarily require much time and careful observation of many heart wounds, to determine the necessary procedure in each individual case.

The probabilities are that punctures, however small, into the left ventricle or auricle become enlarged with its systole and that death results sooner or later from hemorrhage alone. Not so, however, with the right ventricle and auricle, the mortality being less with similar wounds. Therefore, one is justified in believing that sutures are less likely to tear out in the thick walls overlying the cavities of the left heart. This statement appears inconsistent. In the more highly developed and older animals of mature ages the heart will be more likely to be sutured successfully.

The superficial vessels (coronary arteries and veins) lie side by side and the amount of hemorrhage in case of trauma depends on its distance from the origin of those vessels. It will depend also upon the character of the wound. Knife and needle wounds, or those of sharp-edged weapons bleed the most and superficial lacerations least.

Closing the Chest Wall.—The closure of the chest of animals is difficult for the reason that the animal can not be kept quiet. Of course, there are several ribs, and at times these are to be closed in two places.

There was silkworm gut and silk (heavy) used in most cases, silk for the bony wall and intercostal muscles, one suture on each side, or rather one between each rib; the ribs were as nearly approximated as possible. Then the muscle and the skin all in one layer sutured with silkworm gut. As before stated, the two tiers of sutures do not come directly above one another, due to the fact that after the first incision was made the outer flap was dissected up for a distance of an inch and then the wall opened. This puts the two rows an inch apart and protects them from the contamination by infection and also makes a sort of valve, like the operation for colotomy and gastrotomy.

In putting in the external sutures they should be close and extend down into the intercostal muscle under the line of skin incision to add to the security of the wound. Not often was there any trouble in getting the wound closed well enough to prevent the passage of air into the pleural cavity.

Drainage and Dressings.—Drainage should be provided for in the same way as wounds in other parts of the body and governed by the same principles. Dressings should be aseptic and securely held in place with adhesive plaster and bandages encircling the body and about the shoulders.

Post-Operative Treatment.—Simple nutritious food should be prescribed with more or less stimulation, as the case may require. Alcohol by the stomach in the absence of nausea. If there is nausea it should be given by the rectum.

Artificial heat should be applied if the temperature become subnormal or if it be otherwise indicated. Oxygen is indicated and is probably the most satisfactory way of stimulating when stimulation is demanded.

RESULTS OF EXPERIMENTS.

In carrying on the series of experiments the object was to induce as many complications as possible. That this might be accomplished aseptic principles were disregarded and the pleural cavity many times entered. In a few instances clots were allowed to remain in the pleural or cardiac sac and sometimes both, that their disposition might be observed. In Case 1, two tablespoonfuls of blood were allowed to escape from the coronary artery into the pericardial sac and there al-

lowed to remain. The clot was afterwards found intact.

Pericardium.—Removal of the pericardium by incision was done in two cases. In one death did not ensue; dissolution occurred in the other (Case 8) as the result of infection, which might have been avoided. In the case of recovery, the heart was adherent to the surrounding tissues. In two cases the pericardium was divided from apex to base with scissors and allowed to retract upon itself, leaving the heart practically in the same condition as if the pericardium had been removed by excision; death resulted in one of these cases.

In Case 5 the pericardium was divided longitudinally and sutured to the chest wall with silk. The animal was killed sixteen days afterward. Even though this dog on the third or fourth day removed these sutures in the chest wall with his teeth, the wound was not infected. He was allowed to lick the wound until the sixteenth day, when he was killed. Autopsy revealed about one ounce of serous fluid in the pleural cavity. There were adhesions of the pleura, pericardium, lungs and heart to one another and to the chest wall.

Coronary Arteries.—It has been found that the ligation of either of the coronary arteries at any point of their distribution will not produce death. In Cases 1 and 9 silk was used for ligation. In Case 3 kangaroo tendon was employed, the ligation being applied at the origin of the artery. The dog's life was taken in the latter case on the fourteenth day and complete repair following the ligation found to have taken place. Several similar experiments were made with the anterior coronary arteries with practically the same results.

Accidental puncture of one or more branches of the coronary arteries occurred in three cases, more or less complicating the operation.

In Case 2 the posterior coronary artery was ligated about midway from apex to base, the second branch being accidentally punctured with the needle was also ligated at the bifurcation of the main branches.

Incisions.—Penetrating and non-penetrating wounds of the heart were made with a bistoury after the chest had been opened and were allowed to remain open from one to ten minutes before closing them with suture. Oblique perforations bleed less, as they are valve-like in character.

In Case 6 two incisions were made in the apex over the left ventricle, each being one-half inch long. The dog died at the end of seventy-two hours. The incisions were estimated to penetrate about one-fourth the thickness of the ventricular wall. They were shown at autopsy to have practically repaired themselves. The dog was found to have general tuberculosis, which was suspected at time of operation and which was, no doubt, the cause of his death, there being no other perceptible cause.

In Case 9, while suturing a penetrating wound three-eighths of an inch long, made in the left ventricle, the left branch of the anterior coronary artery, which had been accidentally punctured, was included in the last and upper suture. The animal died at the end of seventy-two hours. Autopsy revealed about a pint of bloody fluid in the pleural cavity. Also adhesions between the pericardium and chest wall, and between the pericardium and heart. The wound in the heart was completely and permanently closed.

In Case 10 a fine needle armed with silk was made to pass so as to make four sutures closely approximate over the left ventricle, the object being not to perforate the endocardium.

Case 11 demonstrates the suturing of a non-penetrating wound one inch long, involving about half the thickness of the ventricular wall and in which silk was used for suture. Complete suspension of respiration lasted two minutes, but operation was not discontinued during this time. Normal respiration was re-established spontaneously. Death occurred seventy-two hours afterward as result of infection due to the animal having torn out all the sutures in the chest wall. The incision in the heart had firmly united, the heart itself being nearly firm.

In a small non-penetrating wound in Case 14 in the wall of the left ventricle, a continuous suture of silk was applied. Respiration ceased, as the pericardium was being opened, but soon re-established itself and again ceased upon completion of the last stitch. It was not again re-established. The heart continued to beat for two minutes after the last respiration. If death had resulted from the puncture of one or more cardiac ganglia, the heart would not have continued to beat for two minutes after the last respiration.

In Case 17 death occurred while incision was being made in the left ventricular wall. This may have been due to injury to one or more of the automatic ganglia. This is hardly probable; at least, it has not been proven because death has occurred under similar circumstances without any injury to the heart.

An incision requiring two silk sutures was made in the wall of the left ventricle in Case 18. These sutures were made too tight and therefore cut through the muscular tissues of the heart, resulting in death.

Needle Puncture.—One or more punctures of the heart were made in several cases in various portions of the heart. In one, eighteen such punctures were made in various portions of the heart, from the apex to base, the object being to injure the cardiac ganglia. In no instance did death ensue, nor were the movements of the heart influenced to any noticeable degree.

Cardiac Stimulation.—Stimulation of the heart to action after it has ceased was accomplished several times by rhythmically compressing the apex of the heart with the fingers, also by pricking the apex of the heart with a needle.

The most interesting of all such experiments was in Case 16, in which a non-penetrating incision was made in the left external ventricular wall, necessitating the introduction of four silk sutures to close it.

CASE 16.—Aug. 21, 1901. Very fat, black mongrel, age 4 years, weight 50 pounds. Chest cavity opened and pericardium divided. An incision one-half inch long was made in the external wall of the left ventricle; incision in heart's wall closed with four sutures of silk. At this stage of the operation respiration ceased. Muzzle was taken off. Cone for applying anesthetic had been withdrawn about the time the operator began to suture. The operator held the opening in the chest cavity closed with both hands; an assistant kneaded the abdomen in an effort to restore respiration. At the end of the first minute the operator introduced one hand into the thoracic cavity, still holding the chest opening closed with the other hand, and stimulated the heart by pinching the apex. After a time the dog took a deep, labored inspiration. Then respiration was suspended again. Again a few deep, labored inspirations; then suspension for a considerable interval. This procedure continued for several minutes. There would be several deep, labored inspirations at comparatively short intervals of time; then inspirations would be single with a longer interval of time between each inspiration; then a series of labored respirations at shorter intervals of time between each inspiration.

This alternation of single, deep, labored inspiration at considerable intervals followed by a series of several inspirations

not quite so labored, and at shorter intervals between each inspiration continued until the dog regained normal respiration. The operator, in stimulating the dog's heart, observed and called the attention of his assistants to it, also that the heart began beating at the end of each inspiration. There were three beats of the heart after each inspiration. The movements of the heart ceased with the suspension of respiration. After each labored inspiration the heart would beat three times, but would be absolutely motionless in the interval between inspirations. The heart's movements were completely suspended $3\frac{1}{4}$ minutes. Respiration was suspended this length of time, and the heart did not beat until after the first inspiration. It took about three minutes after the first deep, labored inspiration for the dog to regain normal inspiration.

In no case when suspension of respiration occurred in this series of experiments were drugs given subcutaneously or otherwise to promote the heart's action. Neither was resort made to transfusion or any other artificial means employed to stimulate the heart.

Autopsy.—Dog died August 29, and postmortem was made the same day. Infection general; a quart of bloody fluid in pleural cavity; sutures in both the chest wall and cutaneous structures had rotted away. Pericardium, heart, pleura and lung were adherent to one another and to the chest wall.

ADDRESS ON AN EXHIBIT OF EARLY (PRIOR TO 1860) BRITISH AND AMERICAN OPHTHALMIC LITERATURE.

CASEY A. WOOD, M.D.

CHICAGO.

(Concluded from page 1156.)

Two years after the publication in Philadelphia of Saunderson's work, there appeared the first text-book by an American writer, George Frick. We owe most of our knowledge of this pioneer of American ophthalmology to our distinguished colleague, Harry Friedenwald. I quote from his interesting contribution to the *Johns Hopkins Hospital Bulletin* for August-September, 1897, "The Early History of Ophthalmology and Otology in Baltimore."

Frick was born in Baltimore in 1793. After obtaining a broad classical education he entered the University of Pennsylvania, where he obtained the degree of doctor of medicine in 1815, and in 1817 he was admitted as licentiate of medicine into the Medical and Chirurgical Faculty of Maryland. He then spent several years abroad, returning to Baltimore about 1819 to engage in the practice of ophthalmology. He was appointed surgeon to the Baltimore General Dispensary, where he established the first Eye Dispensary in Baltimore, in 1824. In 1832 he delivered clinical lectures at the Maryland Hospital. His name is found on the list of vaccine physicians for 1821. He was a member of various medical societies; was secretary of the Faculty in 1823, and joined the Maryland Medical Society in 1822. He was much interested in general science, and was one of four physicians to organize a society for promoting science in 1819. He was likewise a member of the Maryland Academy of Sciences, its librarian in 1824 and curator in 1836. He devoted himself to the practice of ophthalmology and to the cultivation of general scientific studies, as well as to music for a number of years. He was unfortunate in growing very deaf before middle life, and it is probable that this interfered greatly with his practice in medicine; for somewhere about 1840 he entirely relinquished it and left Baltimore to spend most of his time in Europe, paying occasional visits to this country. He died in Dresden, March 26, 1870, aged 77 years. Dr. Frick had never married. He was a man of very retiring and modest character and of kind disposition. He was a careful scientific student and his work and writings deserve high praise. In 1820-21 his article on "Observations on Cataract and the various modes of operating for its cure"

appeared in the *American Medical Recorder* of Philadelphia. In 1821 an article on "Observation of the various forms of Conjunctivitis" appeared in the same journal, and in 1823 his paper on "Observation on Artificial Pupil and the modes of operating for its cure." His most important work, however, was "A Treatise on the Diseases of the Eye; including the doctrines and practice of the most eminent modern surgeons and particularly those of Professor Beer," which was published in Baltimore by Fielding Lucas, Jr., in 1823. It was inscribed to his teacher, Dr. Physick of Philadelphia. It is well and clearly written, the system on which it is classified is excellent, and no greater praise could be given it than stating the fact that it was republished three years later in London by an English surgeon, Richard Welbank, a member of the Royal College of Surgeons and of the Medical and Chirurgical Society of London, and dedicated to the ophthalmologist, William Lawrence. Numerous foot notes were added, but the text suffered no change. The reviews which the book received were very complimentary. The *Philadelphia Journal of Medical and Physical Sciences* (probably Dr. Isaac Hays) contains a review covering 18 pages: "The author evidently possesses a cultivated and well-disciplined mind; he appears to be intimately familiar with German writers, and we feel much indebted to him for making us acquainted with their writings."

In the *American Medical Recorder* of 1824 a still longer review is to be found, covering 32 pages. The writer describes the book in terms of high praise. He "offers the humble tribute of (his) thanks to the author for the benefits which he has conferred on the profession generally, by presenting them with a volume of great value and utility, and one which was much wanted. As a manual of the diseases of the eye, we believe it to be the best which has been published. It contains all the improvements which have enriched ophthalmic surgery, in such a surprising degree within a few years past," etc.

In 1825 this work was placed on the list of those which the student was required to have read before applying to the Medical and Chirurgical Faculty of Maryland for the examination for licentiate in medicine.

While we are on this subject let me remind you that Frick's was not the only early ophthalmic treatise written by an American and republished in London. Littell's "Manual of Diseases of the Eye," first printed in Philadelphia thirteen years after Frick's treatise saw the light, appeared in London two years later (1838), revised and enlarged by Hugh Houston. The preface to the first edition, which was a very creditable performance, exhibits, however, an astounding ignorance of contemporary literature. The author had never heard of his compatriot, Frick, and I suspect was equally ignorant of the writings of several of his predecessors. For example, he says nothing about a compilation, published in 1832 by W. R. Lucas, of John Mason Gibson, who, like Frick, was a member of the Baltimore school. Friedenwald says of Gibson:

He was admitted into the Faculty in 1825, and that his name appears as late as 1848 in the list of members with the title of L.M. In the next succeeding list published in 1853 Gibson's name is missing. In the preface he tells us that his book is an "attempt at collecting the best matter on diseases of the eye"; that "diseases casual to vision are many and frequently met with in this country; the curative practice has not been sufficiently inculcated in our universities, by impressing on the mind of the student where and when the importance and great nicety of judgment are requisite in the treatment of them, and that by inadvertent and malpractice the victim may grope through his existence here in the valley of darkness." The work is one of compilation, "being made up of extensive quotations from the classical writers of the day." He claims originality only in the construction of his plates, and so far he is certainly correct, for the drawings are quite unlike anything seen in Nature. The arrangement of the work is very curious. The chapters follow in this order:

Anatomy of the eyeball, cataract, ophthalmia, corneitis, iritis, choroiditis, retinitis, inflammation of the lens and its capsule, ulcers of the cornea, opacities of the cornea, pterygium, prolapse of the iris, extirpation of the eyeball, extraneous bodies, diseases of the lachrymal apparatus, under which is included entropium, ectropium, epiphora, encanthus, injury of lids, ophthalmia tarsi and fistula lachrymalis, looking very much as though the subjects had been drawn haphazard from a grab-bag. At the end of several chapters the author adds original remarks. When we consider the very excellent and systematic work which Frick had published, nine years previously, as well as such other works from which copious quotations are made, it is quite inexplicable why Gibson showed such disregard of systematic classification, or indeed what purpose he had in publishing the work at all.

I can not let this opportunity pass without a reference to the fact that Americans early began to push forward the car of ophthalmic progress. In a recent review of this subject I pointed out (what was known in a general way) that Isaac Hays, the first editor of the *American Journal of the Medical Sciences*, was, as well, a voluminous writer on ophthalmic subjects in the still earlier *Philadelphia Journal of the Medical and Physical Sciences*. He was the inventor of the knife-needle, pictured in Bull's edition of Solberg-Wells' "Treatise on the Eye" (page 339, 1855). In the former journal for November, 1831, will be found one of the earliest accounts, by H. Morton, of the relations of convergence to accommodation. Again, in the same periodical, for April, 1845, Earle has written an original essay on "Color Blindness." If John Taylor did not do the first operation for strabismus it is highly probable that the idea was carried into practice by at least two Americans years before Stromeyer and Diefenbach published their monographs. Here is the evidence, which you may accept for what it is worth: Atwell, writing in the *Philadelphia Medical Examiner* for February, 1842, says: "In the year 1812-13 I attended courses of surgical and anatomic lectures delivered before the medical school of Brown University by William Ingalls, then the professor of anatomy and surgery in that institute; being subject myself to this infirmity (strabismus) Dr. Ingalls took frequent opportunities to explain to me the method of its surgical cure—he did this by dissection of the eye itself—giving an explanation of the power and disposition of the several muscles appertaining to that organ, and showed me how by a division of one or more of them the eye might be brought to its proper place. In my own case I know he proposed to divide the rectus internus. So strongly was I impressed with the practicability and success of this operation that I strongly urged my father to permit me to submit to the operation; but upon the nature of the operation being explained to him he declined the permission because he feared the effect might be to turn the eye the other way."

If this be considered insufficient grounds for awarding the claim of priority of discovery, I quote from Friedenwald's history as follows:

In the American Appendix to the second edition of Cooper's "Dictionary of Practical Surgery," edited in America in 1844 by David Meredith Reese, who in 1842 was professor in Washington University of Baltimore, we find a very curious reference to Professor Gibson under the head of strabismus: "It appears from the Institutes of Surgery that Professor Gibson attempted the cure of strabismus by dividing the recti muscles of the eye, precisely as now practiced, some twenty years since, in Baltimore. Soon after he repeated it unsuccessfully in Philadelphia, in several cases, and was induced to abandon it by unfavorable opinions expressed on the operation by Dr.

Physick. He, however, inculcated the propriety of the operation on his class many years since, and Dr. A. E. Hosack of New York, then one of his pupils, distinctly recollects Dr. Gibson's expressions of confidence that the operation would ultimately succeed. I had no little difficulty in finding the reference to which Dr. Reese refers. The first five editions of Gibson's *Institutes of Surgery* (published between 1824 and 1838) contain no chapter devoted to strabismus. Its treatment consists almost entirely in a paper written by Charles Bell and sent by him to Gibson. In this chapter the above reference is likewise not to be found. It is only in the sixth edition, published in 1841, that we find the reference. It is of such importance that I shall give it in detail. On page 375 Gibson states that: "In the year 1818, while practicing my profession extensively in Baltimore, the late Mr. B. J. consulted me about his daughter, a child of eleven or twelve years of age, both of whose eyes were directed very much inwards, and were thereby greatly deformed by a squint. I advised a pair of goggles, so contrived by having a small opening in the center of each, as to oblige the child to direct the cornea to these openings, and by perseverance for several weeks, succeeded in diminishing the deformity but not effecting a cure. In the course of my visits the child remarked at different times that her eyes felt as if tied by a string. Struck with this observation, and conceiving the disease might depend on shortening of the internal rectus muscle, I determined, the first opportunity, to try the result of division of that muscle; and as the friends of my young patient were unwilling the experiment should be first tried on her, I selected a hospital patient, and after some difficulty in fixing the eyeball and cutting the muscle across, succeeded in restoring the eye partially to its natural situation. On two other patients I repeated the experiment, without much better success, but on dividing a muscle in a fourth patient, after my removal to Philadelphia, the eye was so completely turned to the opposite direction as to bury the cornea beneath the lids and create a much greater deformity than had previously existed. On showing the patient to Dr. Physick, he advised the experiments to be abandoned, as likely to be followed by very unfavorable results. I mention these circumstances, not from a desire to receive credit as an inventor or to detract from the claims of the distinguished surgeon with whom the modern operation of strabismus originated, but merely as a curious fact, calculating to show the importance of not laying aside processes apparently founded on correct principles, simply because we are at first foiled in our attempts to execute them. How much benefit would have resulted to the community if I had followed up my operations until I ascertained the proper mode of correcting them, or how much injury I might have inflicted on individuals by perseverance in the attempt; I shall not stop to inquire. It is sufficient for me to announce the fact—which I have no doubt could be easily substantiated by many pupils who attended my early lectures, some of whom have indeed already proffered their testimony—without being over-solicitous, in setting up a claim as an inventor, of exposing my awkwardness and perhaps want of knowledge of the principles that should have guided me in following out the practice I had attempted to institute.

The Professor Gibson referred to is William Gibson, born in Baltimore in 1784, educated in Edinburgh, professor of surgery in the University of Maryland from 1812 to 1819, and in the University of Pennsylvania from 1819 to 1854. Besides this claim of the discovery of the operation for strabismus, Hirsch tells us that Gibson described as early as 1819 (see the *New England Journal of Medicine* for that year) the following original operation for the removal of cataract:

The iris was in the first place dilated by the application of atropa belladonna. A common sewing needle, slightly curved and armed with a single thread of silk, was then passed through the tunica sclerotica about two lines from the cornea where the couching needle is usually introduced, through the opaque lens and out of the opposite side of the cornea, at a point corresponding to the one at which it was introduced.

The silk being drawn through, and the ends cut off, a single thread was just left passing through the ball of the eye, and acting on the diseased lens in the manner of a seton. It was feared that serious inconvenience might arise from the irritation produced on the tunica conjunctiva from the excessive sensibility of this membrane. Fortunately, however, neither this nor any other accident intervened, and at the end of ten days, in both cases, the diseased lens had disappeared, and in its place the silk was distinctly seen passing like a bar across the pupil of the eye. The silk was withdrawn and in a few days the vision was restored. In the third and last case in which this operation was performed it failed, in consequence of the iris being wounded. This caused such an inflammation of the organ that it was deemed proper to withdraw the seton at a very early period. This accident was attributed to not using the belladonna.

Roosa in his text-book calls attention to the fact that Professor Dewey of Union College (1849) has a strong claim to the recognition as the discoverer—prior to Donders—of hypermetropia and called by him neomacropia. Blackman's operation for the relief of spasmotic entropion, said to be superior to Himly's, is described in the *New York Lancet* for June, 1842.

The first periodical printed in English and devoted to the eye and its diseases is the *Royal London Ophthalmic Hospital Reports*, the first number appearing in 1857. Five years afterward (in 1862) the second one, the *American Journal of Ophthalmology*, edited by Julius Homberger and published in New York, survived two years.

This list of American publications containing original discoveries would be incomplete if no reference were made to the first Canadian treatise on the eye, a work of 517 pages, edited by Henry Howard of Montreal, in 1850. In it, among other interesting matter, will be found an illustrated description of the author's method of removing cataract with an "arrow-head" knife.

It seems strange that the invention of the ophthalmoscope should have produced so few English and American atlases reproducing fundus findings. The early maps and atlases of Wardrop and Dalrymple, reproducing mostly external diseases of the eye, furnish numerous and beautiful examples of the engraver's art, wrought in a style that puts to shame many a more pretentious volume of recent years. If we stretch a point and except a small and badly made book by the British ophthalmologist, Jabez Hogg, issued in 1862, no English atlas falls within the time limit of this paper.

One of the most marked and beneficent literary results of the use of the ophthalmoscope was to greatly abbreviate the long vocabulary and to restrict the nomenclature of ophthalmology, generally because the many so-called functional diseases were shown to be due to demonstrable lesions, and many so-called diseases were found to be symptoms merely, often of several widely differing lesions. The long-winded chapters and monographs on "amaurosis and amaurotic affections" practically disappear from literature. Ophthalmologists were able to smile with Walther, who described the amaurosis of the pre-ophthalmoscopic era as a condition in which "both the physician and the patient were blind."

May I, in closing, draw your attention to the excellencies of William Mackenzie's text-book (1833-1855). Let us take, for example, the edition containing addenda; notes by Addinell Hewson and the Wharton-Jones prefix—the second American edition—published in Philadelphia, 1855. I do not believe that there is to-day, in any treatise, a better account, from a clinical standpoint,

of the ordinary external diseases of the eye. The two decades of Mackenzie's activity bred a school of clinicians whose like, having in mind their necessary limitations, we have not so far seen and may never see again. In a sense—a narrow sense perhaps—the introduction of objective means of examination seems to be coeval with a diminution in our powers of observation. The lessons to be learned by simple inspection of the eye and of the patient, as well as by the careful weighing of the evidence afforded by his symptoms we have exchanged for such signs as are demonstrable by the ophthalmometer, the microscope, the ophthalmoscope, the retinoscope and the use of magnifying glasses with the oblique and other forms of examination. Far be it from me to underrate the value of these means of diagnosis; I merely wish to point out that the text-books of half a century ago were, in the main, characterized by what seems to me to be lacking in modern treatises—a proper regard for the purely clinical aspects of ocular disease.

Another fact that must strike the reader of the best of the mid-century treatises is that if a fairly large percentage of the population now consult the optician instead of the ophthalmologist the profession is pretty much to blame for the practice. This, for example, is what Mackenzie says: "When a near-sighted person wishes to be fitted with concave glasses, the simplest and surest plan is to try a series of them, at an optician's shop"—and, sure enough, the short-sighted person has continued to "try a series" ever since!

One might multiply indefinitely the observations which every reader of the writings of the fathers in ophthalmology would be likely to make. They do not differ, let us hope, from the acknowledgments which our children's children will make of our patient strivings after truth, of our undoubted accomplishments and of our hopes for the future, nor can we hope to escape at the same hands criticism of our primitive methods, our mistaken pathology and our ineffectual therapeutics.

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RENAL INSUFFICIENCY IN THE TROPICS.*

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HOT SPRINGS, ARK.

Without touching on the theories of Garrod and Latham on the one side and Haig and his followers on the other as to the origin, effect and disposition of uric acid, which theories prove ever debatable, the writer of this paper passes to the more simple and practical consideration of a certain condition of the blood which conclusively announces the fact that the kidneys are not performing their function and that the condition is one of danger. For the purposes of this essay the cause of "this certain condition" will be referred to as "urinary solids."

Renal insufficiency is failure on the part of the kidney to perform its function. A more practical title to this paper would be, a plea for systematic instruction in the use of water in the tropics. Lack of volume to the circulation means renal insufficiency sooner or later, whether the failure in function on the part of the kidneys be from overwork or from inactivity. Physiologists, writers on practice of medicine, military hygiene and on diseases of the tropics agree that water is an essential proximate principle, and that the normal animated being requires in its economy water in the proportion of 75 per cent. of the bodily weight in order to maintain health, but no one of the writers has offered an emphatic word or a practical word of counsel as to how much, when or how water should be consumed so as to properly and faithfully discharge the function of maintaining bodily health.

It can not be assumed that all who thirst will drink; this is true only of the lower animals who are guided instinctively to self-preservation, and true only of those of the higher class of animal, man, who have recognized the importance of obeying nature's calls rather than sacrifice the benefits to be derived from her wisdom, to pleasures and to the seeming necessities of life's vocations. The business man is on guard as to his stock in trade; the worry from watching employes and his other anxieties of the busy forenoon crowd back into insignificance nature's appeal for water at regular intervals. Not until the fever heat in the throbbing heart of finance has cooled from its daily rise does the man on 'change listen to the call for water to supply the waste incident to the rapid combustion that has taken place; water to

flush the channels of the debris of conflagration. The farmer building his fence, digging his ditch or plowing his crop is too much absorbed in visions of prosperity and air castles to stop now and then to replace the loss sustained by sweating; he will stagger a while longer under his burden, it will soon be noon and then he can drink with unlimited satisfaction from the old well. All procrastinate when the instinctive call for water appeals to them, and each readily puts it off to a more convenient season, which will be, usually, the next meal hour, then each takes more water than is wholesome, either for the digestive process or for nerve functions. These classes have not been taught.

When the instinctive call for water appeals to the soldier he would probably respond, but under present discipline he is forbidden. No attempt is essayed here to criticise, but attention is simply invited to the fact that there exists among those on whom the army unit depends for sanitary instruction an almost decided trend warning the soldier to leave water alone as a dangerous element in the camp and field; simultaneously, the same men may write chapter after chapter on the important theories of obtaining pure water, but never a line as to how much of it to drink, or when or how. One writer on military hygiene advocates "the habit of rarely drinking between meals" (Munson), and further on in his magnificent work mentions gastro-intestinal disorders due to drinking water at meals. Official documentary hygienic guides direct the soldier to "drink as little as possible even of cold water." They say: "Experience teaches the old soldiers that the less they drink on the march the better, and that they suffer less in the end by controlling the desire to drink, however urgent." There is no reason given for this advice except that "Experience teaches the old soldier." If the soldier can not drink water in safety between meals, or at meals, or on the march, what must he drink, and when must he drink, now that the canteens are closed?

The score of authors on military hygiene and on tropical disorders appealed to on this subject, either by silence or by feeble assent confirm in a measure the water abstinence dogma. Only one writer encountered lays stress on the importance of keeping the system supplied with water as fast as it is dissipated. Colonel Smart, in his paragraph on sunstroke, advises the halting of troops on the march every hour in order to re-adjust equipment and replenish water supply. If this eminent authority so advises for troops in the temperate climates, how much more important for obvious reasons are frequent halts on the march for troops in the tropics. The field and line officers of the old "establishment" are familiar with the old dogma, and many of them here in the tropics insist on punishing themselves and the men with thirst and its sequels.

Since pitching camp on La Loma line in the fall of 1899, and on for two years in the field in the provinces of Union, Benguet, Laguna, Morong and the islands of Romblon, Tablas and Samar, attention has been drawn to a heterogeneous accumulation of symptoms among the sick that could indicate no other disorder than auto-intoxication from renal insufficiency, faulty assimilation of food playing its part. The daily exhausting practice marches for green troops, the reconnaissances, the expeditions and the fatigue work to which the men were subjected in steaming jungles, rice fields and mountain trails, together with their negligence, ignorance or fear, from one cause or another, of the drinking of water, would invariably yield to the field hospital a daily contingent of disorders which would seem not so much at-

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tributable to the popular adversary "malaria" in its several phases and other alleged ailments as primarily due to auto-intoxication from renal insufficiency. Men on days following such exhausting duties would present themselves, inviting attention to some of the following disorders: rheumatism, fevers, cardiac disturbances, headaches, urethritis, non-specific and recurrent specific, cystitis, skin eruptions (suddenly appearing and later developing into classified dermatia, many with glandular and suppurative complications), melancholia, nostalgia, hysteria, neuralgia and well-defined dementia.

According to Munson, Manson, Moore, Nielley, Cullimore, Rattray, etc., the disorders for which the tropical climate seems responsible (excepting infectious or endemic diseases) are as follows, and in fact no other than those mentioned above, the symptoms of which can be shown to be those of uremia due to excessive loss of body fluids by the skin or to consequent suppression of the excretion of urinary solids.

1. *Nervous Disorders*.—Insomnia, somnambulism, irritability of temper, inability to concentrate thought, neuralgia, hysteria, dementia, etc., and the nerve suffering from what Dana calls "nerve desiccation" acute.

2. *Gastro-Intestinal Disorders*.—Dr. Munson says, due to "great loss of bodily weight by sweating" there is "diminution of saliva, mucus, gastric biliary and pancreatic juices; dryness of the throat and fauces, exaggeration of thirst, weakness of appetite, impaired digestion, gastric fulness after eating and habitual constipation." What more urgent appeal is needed for water?

3. *Cardio-Vascular Symptoms*.—Quoting from the same writer, "there is low heart beat, lowered arterial tension, due to loss of fluids by increased perspiration favored by relaxed capillaries."

4. *Cutaneous Eruptions*.—To what extent the skin is capable of excreting urinary solids is a moot question, but clinical observation would indicate that its power in this direction is by no means compensatory for the inactivity of the kidneys in the tropics. The skin in its unbridled effort to throw off effete material becomes excrement-sodden, so to speak, and in this irritated condition makes a favorable nidus for parasitic and other enemies of the skin. Bulkley has discussed renal insufficiency in its relation to skin affections and no further mention is deemed of need here.

5. *Genito-Urinary Disorders*.—Due to the "enormous amount of sweat, often amounting to four or five pounds a day—scanty, high-colored and highly acid urine" (Munson). Dr. Munson notes as the result of increased perspiration in the tropics the diminished amount of urine excreted as being one-third only of the usual amount in the temperate climates. He quotes Mourson and Eijkman as to the diminished amount of urinary solids excreted, but no particular stress is laid on the prevention of the effect this irregularity may have on the system in producing or exaggerating any of the disorders for which the tropics are peculiar.

In April, 1900, out of two companies in a three-day expedition from Paete east, in Laguna Province, through jungles, marshes and hills, thirty-seven of the one hundred and eighty men who had become hardened and well disciplined by three months of campaigning in the mountains of Union and Benguet provinces, were rendered non-effective in a seven-mile march on the last day of the expedition with the following disabilities: "Melancholia, hysteria, painful and scanty micturition, severe headaches, acute rheumatism and fever, 30; sprained

ankles, 3; gastro-intestinal disorders, 4. (From field diary.)

Six of the thirty had a return of an erstwhile quiescent gonorrhea, and two exhibited a non-specific urethritis. The march was a forced one, and the men were specially denied the privilege of halting for water more than twice in the six-hour march, it being deemed by the commanding officer a breach of a time-honored custom to drink water while on the march.

In May, 1900, a stalwart private of "E" Company, 29th U. S. V. Infantry, after having done an unusually fatiguing tour of guard duty one day in the broiling and steaming streets of Navotas, went to bed early that night, and later, jumping up screaming in his sleep, rushed the length of the barracks and hurled himself through the window to the stone floor below, sustaining a compound complicated fracture of the left elbow. On the morning after the accident, before leaving for Manila, he stated that he recently noticed no ailment save scanty and painful urination. He died of "gas bacillus" poisoning in Manila.

Lieutenant —, U. S. Army, a faithful disciple of the water abstinence dogma, an energetic, untiring and persistent pursuer of the warrior class of Filipino, reports that in last June in an unusually fatiguing forced march, he suddenly became nauseated by pain in the left testicle, became dizzy and unable to march. The following morning a well-defined urethral discharge was present accompanied by an enlarged and painful testicle. The surgeon on duty pronounced the trouble a specific one. The officer had never contracted a venereal disease and so applied for treatment in Manila. The laboratory examination revealed a non-specific urethritis. A well-developed hydrocele is the present sequel. There can be little question that the cause of such disturbances is no other than loss of body fluids from excessive perspiration, the exciting cause being uremia or renal insufficiency.

Up to last April no facilities were offered the writer for making urinary analyses. At the Division Hospital at Los Banos (Hot Springs) ample opportunity and material have been afforded for investigation and for concluding that the many noted cases encountered in the field simulating phases of malaria, heatstroke, rheumatism, etc., were primarily caused by renal insufficiency. The first one hundred cases admitted to the hospital at Los Banos were taken to test the difference in the amount of urinary solids excreted in the Philippines and that excreted in the temperate climates in the same body weight. In the following one hundred cases only one was found to exhibit true casts in the urine:

Number of patients.	Weight.	Total solids; grs. Normal.	Smallest amount of solids passed in 24 hr.; grs.		Greatest amount of solids passed in 24 hr.; grs.	
			On admission.	On return to duty.	On admission.	On return to duty.
3	120	974	145	560	462	806
56	130	1028	156	660	701	1000
20	140	1078	415	665	739	1020
15	150	1150	209	760	957	1050
5	160	1198	363	960	1089	1120
1	170	1237	900	1200		1200
1	200	1330	1023	1270		1270
Average	167	1142	458	865	753	1063

The cases were chronic forms of rheumatism, venereal diseases, skin diseases and neuroses. The results in the above table show a remarkably low excretion of solids on admission to the hospital, and this, too, while the patients were in a passive condition, more favorable for

renal activity. The increase of solids excreted on return to duty commends the idea of systematic instruction in the use of water, for no other treatment was employed.

The sum of the symptoms of the above classified disorders due to meteorologic or tropical peculiarities is equal to or identical with the sum of the symptoms of the gout and uremia of the text-books, and these symptoms are but those of auto-intoxication due to renal insufficiency, with or without structural change in the kidney. Faulty assimilation playing its part.

Garrod, Luff, Latham and others with one theory, and Haig, Bouchard, Jelks, Bulkley and others with another theory, have written at length and in detail of the multifarious annoyances of renal insufficiency, its relation to diseases of the skin, gastro-intestinal disorders, nervous phenomena, cardio-vascular symptoms with and without structural change, and, although they do not come out distinctly and declare the highly important value of systematic use of water, one can plainly see that it is deemed by them the "sheet-anchor" in prophylaxis and in treatment. In the one hundred cases cited, as having been observed in the Hot Springs Hospital at Los Banos, no other diuretic than water was employed; for, indeed, no other was needed to bring about the almost normal excretion of urinary solids, noted on the return to duty of the patients. It should here be explained that the judicious use of hot baths and vapors in this connection in no way impeded the activity of the kidneys. On the contrary, the hot saline water on account of being rapidly assimilated when taken internally, and on account of its benign and certain action on the nervous system by the centripetal pathways, when applied externally, caused an equilibration in the circulation and an almost normal renal emunction.

It is not the purpose of this paper to offer a plan of instruction in the use of water for the prevention and treatment of diseases, although the writer has decided views on the subject. If attention is attracted to the importance of such a plan the object of the paper has been accomplished. There can be no doubt in the minds of surgeons who have served with troops in the exhausting climate of the Philippines that from a practical standpoint much suffering and sickness on the march and following the march can be averted by a regulated and uniform use of water internally and externally. The regulation of such uses of water in the field and in camp can be made practicable. The experience of the writer with the soldier in the field and in garrison inclines him to believe that the enlisted man who takes any interest whatever in being a soldier is never slow to take common-sense advice to the letter when it concerns his diet, clothing, general personal welfare, etc. The enlisted man pays little heed to advice or directions given in a generalizing way. He is neither impressed nor interested. Advice to him must be kindly persistent, special and to the point. Line officers approached on the subject say that it is doubtful whether soldiers can be taught to use water in any systematic way. Why not? The gawky woodsman, the shambling farmer lad and the Bowery "slummer" are, by discipline, gymnastics, foot and arm manual, and the fear of the guard-house, readily transformed into soldiers with grace and action; are made proficient in the care of their clothing and persons, are made proficient in first aid to the sick and wounded; they are taught how to sleep and how to eat; why can not they be taught how to drink water for health? Line officers say that they have watched soldiers here in the Philippines on the march and have observed that those who drank water were invariably the first to

"fall out"; that those who drank water wanted to drink all the time; that the more they would drink, the more they would sweat; that they have seen them approach a well or stream and drink cupful after cupful and fall with cramps and be unable to proceed, thus proving an impediment of serious nature. So has the writer seen just such exhibitions on several occasions; he is making now a plea for instruction of those who do not know.

CONCLUSIONS.

1. Whether the systemic disturbance causing the usual disorders peculiar to the tropics be uric acid or faulty metabolism, or both, the kidneys in the tropics do not perform their share of the work of emunction.

2. The reason for this renal insufficiency in the tropics is that the tide of water (the necessary solvent vehicle for urinary solids) pours through the skin so rapidly that the volume of circulation is so correspondingly diminished that waste products are stranded in those tissues most favored by the weakened flushing force for stasis.

3. The remedy is the internal use of water as fast or faster than it is wasted by the skin in order to force the kidneys to work and to maintain normal volume in circulation, and the external use of water and sun baths systematically for their toughening and contractile influence on the skin.

Clinical Report.

A RARE CASE OF INSANITY.

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A year ago there came under my observation a case which I think of sufficient interest to report. It was that of a woman pregnant two months, the mother of three children, all living and in perfect health. Up to this time she had always been well. To all appearances her case the first days resembled a typical case of hysteria, but in a few days it was easily recognized as a case of dementia. As gestation increased so did the insanity. In the latter months she passed almost into a condition of stupor, talking to no one, refusing all food and did not even take care of her person; in fact, she had to be cared for as though a baby. She presented a pitiable sight and became very much emaciated. Labor came on at the usual time and was accompanied by hydrops amnii and complete uterine inertia. The usual oxytocics had no effect whatever.

I delivered her with forceps of a seven-pound boy, perfect in every way. After delivery I gave her no more medication. She made an uneventful and rapid recovery and at this writing is in perfect health. At no time during the disease did she become violent. All medicines usually used for such cases proved futile.

I have seen several cases of puerperal mania occurring after confinement, but this is the first one under my observation coming on at such an early period of pregnancy, lasting so long and terminating so favorably. The urine was repeatedly examined and was found normal; as were also the heart and other organs.

Summarized Conclusions of Original Articles.—The Italian *Riforma Medica* publishes as standing matter on the cover an urgent appeal to authors of original articles to summarize their final conclusions as "useful to the reader and adapting the article for easy diffusion in other periodicals." THE JOURNAL has always advocated this principle, and rejoices to see that it is becoming more universal. A model in this respect is the *Rivista di Freniatria*, also an Italian publication, which not only gives the final summary but has each division of the subject summarized in numbered conclusions before reaching the final ones. Certain German quarterlies also follow this custom. An article thus summarized is easily reviewed and abstracted, and the exact ideas of the writer are comprehended at a glance, and are worthily presented in the brief abstract.

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OPERATION FOR CHRONIC NEPHRITIS.

During the past year there has been a great deal of interest in this subject, particularly since the appearance of Edebohls' paper,¹ in which he claimed eight complete recoveries from various forms of chronic Bright's disease at least one year after decortication of the kidney. After report of such brilliant results several operators undertook the procedure, but with less satisfactory results than Edebohls reported. It seems certain, however, that operative measures relieve or cure certain cases of nephritis, and it is a highly important question to determine just what classes of cases are suited for intervention.

From a careful study of a series of 17 cases which he has operated on for various forms of chronic nephritis, Rovsing,² professor of surgery in the University of Copenhagen, attempts to formulate some rules as to the proper treatment in such cases. He divides the cases into aseptic and infectious nephritis. In the aseptic cases he found that diffuse parenchymatous nephritis was not influenced by operation. A case which he classed as chronic glomerulo-nephritis recovered after operation, he believes, more from rest in bed than from any favorable result from the operation. In diffuse hemorrhagic nephritis there is much danger in operating and the results are not satisfactory. In four cases of interstitial nephritis and perinephritis fibrosa occurring with uric acid and oxalic acid diatheses his results were satisfactory. Operation is frequently undertaken with a diagnosis of stone in the kidney in such cases and gives relief without any stone being found. The severe pains which are present in these conditions he believes indicate operation. Pain always indicates tension within the kidney capsule, it does not matter what form of nephritis exists. But the most important group of cases is that caused by some form of infection. Eight of his cases were of this character and the condition was only discovered after most painstaking examination. Urine obtained under aseptic precautions should be accurately examined; chemically, microscopically and bacteriologically in every case, whether we suspect that we have to deal with an infection or not. In case pathologic constituents are found, cystoscopy and catheterization of the ureters should be employed. In his cases Rovsing found infections of the urine from the *Staphylococcus aureus*, *Staphylococcus albus*, *Streptococcus pyogenes* and *Bac-*

terium coli. The entire clinical picture did not differ in these cases from that in the aseptic forms of nephritis. Neither was there any difference in the chemical constituents of the urine or of the appearance of the kidney when it was exposed. The results of operation in these cases were very much more satisfactory, however, than in aseptic cases, and Rovsing believes that his cases show definitely that unilateral chronic nephritis may be of infectious origin; that it may affect a greater or smaller part of the kidney, or that we may have a double partial infectious nephritis. Stripping off the kidney capsule, which gives such favorable results in cases of aseptic interstitial nephritis with perinephritis and severe pain, also has a favorable influence on inflammatory processes. In hemorrhagic cases he believes that splitting the kidney will give favorable results in the milder infections, such as by the *Bacterium coli*, but it is dangerous in the more virulent infections. Resection of the diseased part in case of local infectious nephritis which entirely resembled chronic aseptic nephritis led to cure in two of his cases.

Further investigation is needed to prove the value of Rovsing's suggestions. Up to this time infection with ordinary pyogenic bacteria has not been considered such an important etiologic factor in cases of chronic nephritis, though it might have been suspected that the cases following scarlet fever, erysipelas and other forms of infectious disease were of this character. The careful study of this class of cases which Rovsing suggests, if carried out by competent observers, could not fail to give important results. If further study of such cases proves that we can find such definite indications for operation as are above suggested a great advance has been made and undoubtedly many lives will be saved. The skepticism of many surgeons as to the advisability of operating in every case of this kind seems warranted from our present knowledge, and until definite grounds have been shown from more careful study of large series of cases by competent men, routine operation for chronic nephritis in any case can not be considered an established surgical procedure.

CLINICAL PARATYPHOID FEVER.

It seems clear now that there must be accepted a group of affections very similar to typhoid fever clinically, yet due to an essentially different etiologic factor. The cases of so-called typhoid fever affecting about 5 per cent. of all the patients presumed to be suffering from that disease in which no Widal reaction can be obtained, either during the course of the fever or the convalescence, are, in the light of recent investigations, due, not to the Gaffky-Ebert bacillus, but to a micro-organism of the colon bacillus family, having many morphologic and cultural similarities to the genuine *Bacillus typhosus*. The work done in elaborating distinctions between these closely allied bacillary groups which has occupied so many minds for so many years is now to have its reward, for certain at least of the colon

1. Medical Record, Dec. 21, 1901.

2. Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie, 1902, vol. x, p. 288; see THE JOURNAL, May 22, 1902, p. 796.

family are to be recognized as playing a distinct specific pathologic rôle in the enteric fevers of human beings.

It is not surprising that there should be an addition to the number of specific infectious fevers. Their number has grown constantly with the increase of diagnostic acumen and methodic observation. A century ago measles was not entirely differentiated from smallpox and diphtheria was as yet utterly confounded with scarlet fever. In recent years another specific infectious fever, German measles, has been added to the scarlet-fever-measles group of diseases, and a fourth affection, the so-called fourth disease of Dukes, is vindicating for itself a place beside the other three. It would be surprising, indeed, if further specific infections were not differentiated, for considering the large number of bacterial species known and recognized, only a very few (less than twenty) have been found to be pathogenic for man.

The point of main interest for the general practitioner is the possibility of the clinical recognition of these newly-separated affections. Paratyphoid fever is not a unit, but probably a disease group containing several members. The differentiation from each other and from true typhoid fever is the problem of the present decade. That this will not be easy without the refinements of bacteriologic diagnosis is clear. Paratyphoid fever may run a course so deceitfully like typhoid as to make clinical differentiation apparently hopeless. In a case cited by Dr. Longcope,¹ there was the febrile course of typhoid, rose spots, an enlarged spleen and the diazo-reaction, and two relapses followed the primary attack, while during convalescence from the second symptoms of thrombosis in the left leg developed. It is evident that only the absence of the Widal reaction and the discovery which was actually made in this patient of a paracolon bacillus in the urine, feces and rose spots could furnish proper basis for the differentiation of such a case from true typhoid fever.

While some cases are thus so completely similar as to make assured differentiation by clinical methods impossible, typical cases of paratyphoid fever usually present distinctive features that will at least arouse suspicion of their true nature. Dr. Nathan Brill,² in his paper before the New York State Medical Association at its last annual meeting, compiled a list of certain differences between these affections that have been noted by many observers. The incubation period of a paratyphoid fever is apt to be shorter than in true typhoid. The week's malaise is replaced by three or four days of discomfort, and then, instead of the gradual steplike rise of temperature, there is usually a rather sudden development of fever up to 104, or even higher. The sensorium is prone to be duller than in true typhoid and this apathy comes on earlier in the illness. This will call for a retention of some hint at least of the old name for the new affections, since it is the apathy of enteric fever that is expressed by the Greek root from which the name typhoid is derived. The look of pain in the face is

usually greater than in true typhoid and headache is more complained of. Constipation rather than diarrhea is a prominent feature. Paratyphoid fevers are, as a rule, shorter in their course, and after ten or twelve days there is a rapid lysis followed by more satisfactory convalescence.

These differential points constitute the clinical basis on which suspicions of paratyphoid fever must be aroused, especially in isolated cases under circumstances where the Widal and other serum reactions can not readily be obtained. It is not improbable that careful observation may disclose other diagnostic characteristics which will eventually make the clinical recognition of the new affections possible. In the meantime, a most interesting field for investigation lies open for the general practitioner.

PERIPHERAL NEURITIS AS A COMPLICATION OF GONORRHEA.

That infection with the gonococcus may extend by continuity of structure from the site of original inoculation has long been known, but it is only within comparatively recent times that the occurrence of dissemination through the blood stream has been recognized. The articular or synovial complication formerly designated gonorrheal rheumatism must be considered as having this latter origin, although it has not been established whether it is due to the invasion of gonococci or to the action of toxins elaborated by these. The endocarditis that has been observed and carefully studied in a number of instances has been shown to harbor the micro-organism itself.

A number of disturbances referable to the nervous system have also been described in connection with gonorrhea, and various explanations for their occurrence have been offered. Thus, paraplegia with wasting of the affected muscles in association with gonorrhea has been attributed to reflex influences, to myelitis secondary to ascending neuritis, to an impression on the trophic centers in the spinal cord and to specific gonorrheal infection. Myelitis and cerebrospinal meningitis have been reported in the same connection, and gonococci have been found in cases of the latter in the fluid obtained on lumbar puncture. Cerebral embolism, with hemiplegia and aphasia, may occur as a complication of gonorrheal endocarditis or phlebitis. With a knowledge of the fact that the activity of the gonococcus results in the production of toxic substances it can be readily understood that any portion of the nervous system may suffer in consequence of the effects of the latter.

In this way there may be produced a variety of disturbances attended with changes at the one extreme so slight as to be beyond detection with our present means of examination, and at the other extreme of the most marked character. If the lower segment of the motor tract is affected there will be developed the symptoms of poliomyelitis or polyneuritis, accordingly as the ganglion cells in the anterior horns of the spinal cord or the

1. Am. Jour. of the Med. Sciences, August, 1902, p. 209.

2. JOURNAL A. M. A., Nov. 8, p. 1205.

peripheral portion of the motor neuron is involved; both may even suffer together. Two extremely interesting cases belonging in this general category have recently been placed on record by Dr. T. R. Glynn.¹ The one occurred in a man, 48 years old, who presented, in conjunction with a urethral discharge in which gonococci were found, weakness of the lower, and later also of the upper extremities and of facial and ocular muscles, with abolition of reflexes, muscular wasting, degenerative reactions in some muscles, paresthesia, impairment of sensibility, involuntary discharges from the bladder and the bowel, delirium, delusions, acceleration of pulse and respiration and bed sores. Improvement set in in the course of a month and was slow, but it progressed to complete recovery. It is believed that in this case the entire motor neuron, but especially its peripheral portion, was injuriously affected by the toxin of the gonococcus, or possibly by that of an associated pyogenic coccus. The second case occurred in a young man, 17 years old, with gonorrhea of two months' standing, in whom there developed pain, tingling and weakness in the lower extremities, with abolition of knee-jerks and plantar reflexes, and from all of which recovery ensued.

If these cases be accepted as authentic instances of the complication of which they are reported as illustrative—and there is no sound reason why they should not—they add one more to the already numerous list of infections at times responsible for the development of polyneuritis.

THE CONSUMPTIVE'S CRIME.

According to a modern school of thinkers crime is practically a disease and the criminal should not be punished but should be cured. As a converse to this we have a large portion of the general public practically making disease a crime and cutting off the possibilities of cure while applying the punishment. Not long since a consumptive made nearly the round of the numerous hospitals of Chicago—according to the newspapers—and found himself barred from all. The only resource was to go as a pauper to an attachment of an almshouse in the suburbs.

This is not a unique experience; it has occurred in other cities, and the situation seems to be becoming aggravated. The medical profession has its responsibility for the state of affairs; it has for years been teaching the contagiousness of tuberculosis; health officials have promulgated the idea and just now the public are taking it up and acting accordingly. The unfortunate sufferer from pulmonary disease is beginning to find himself an outcast, a *persona non grata* even among those with whom he formerly associated; he is forbidden the health resorts where he once found benefit, and in many other ways is made to appreciate the fact that what was formerly only a misfortune has now become what, in its results as regards its estimation by the public, is practically a crime. This is not too strong a statement; it is amply warranted by actual facts. A well-

known pulmonary specialist tells that while he was camping in Colorado not long since he had to reply to an individual who was objecting to the vicinity of a consumptive by asking him whether he wanted the man taken out and shot, that being the natural available alternative in the case. It is only a few months since there appeared in one of the leading medical weeklies¹ an article by a physician not only insisting on the danger of contagion, but also charging consumptives as a class with a deliberate criminal tendency to spread their disorder.

THE JOURNAL has always maintained that the abject fear of tuberculous contagion was needless, and with reasonable and perfectly practicable precautions there is no danger in even the intimate association with consumptives. The experience of well-managed consumptive hospitals and sanatoria gives ample proof of this. Moreover, even without these precautions, but with otherwise good sanitary conditions, the danger is by no means as excessive as is commonly stated and supposed by the average layman whose fears have been aroused. In Great Britain, and in this country so far as statistics are available, the mortality from tuberculosis had steadily diminished with the improvement of the standard of living and better sanitation long before the general recognition of the germ and the present agitation for special prophylaxis of the disease.

The prospect of the complete eradication of tuberculosis, so much talked of just now, seems to us an *ignis fatuus*, perhaps of use as an ideal that will be always ahead of us, but not justifying measures that seriously diminish the aggregate of human comfort and happiness. There is no doubt, on the other hand, that by proper methods of increasing the individual resistance, not neglecting rational antisepsis against the germ, we can greatly diminish the mortality and make consumption, not the chief, but only one of the many unavoidable causes of the death which is the inevitable fate of us all. When it does come in this way let us make it easier to the victim, and not be adding to his misery by our selfish and irrational fear. We can also teach the public that the tuberculosis germ has by no means the fatal significance that they are learning to attach to it, that, while probably few if any of us escape it altogether, serious consequences result to only a small proportion of the whole. It is, when we consider the results, criminal to send out the misstatement that one-fifth, or even one-seventh, of the mortality is due to this disease. Probably in future years, and it may be in the near future, tuberculosis will be accounted only of secondary importance as a cause of death; it may even be, like other former scourges of the race at the present day, only a comparatively rare and negligible ailment, but if this is to be it will be through rational and humane methods and not reckless exaggeration and stimulation of insane public fears with their natural result of brutal inhumanity to the unfortunate.

1. London Lancet, Sept. 27, 1902, p. 860.

1. New York Med. Journal, Feb. 8, 1902.

EDUCATIONAL TOURS FOR MEDICAL MEN.

For several years tours to the various watering places and springs of France have been organized by the physicians of that country, thus allowing the participants to combine pleasure and instruction. Last summer two similar tours were planned in Germany, one embracing the saline springs of middle Germany, and the other the watering places on the North Sea. The latter tour began at Hamburg, and the tourists returned after spending eleven days at several of the most prominent resorts. They were carried on one of the steamers of the North Sea Line, which had been placed at their disposal. The men who planned and directed this tour have edited a book of 178 pages containing articles on the various resorts visited and on the influence of a marine climate. Many of the names occurring in the book are well-known writers and teachers.

Similar tours in Germany are to be made annually, and German physicians seem ready to follow the example of the French in this custom. In connection with the meetings of the medical societies in America and England trips have been planned to points of interest adjacent to the places of meeting, but these side trips have usually been for pleasure alone, any educational value attaching to them being secondary or accidental. In a few instances excursions have been planned by means of which parties of physicians have been enabled to visit and become familiar with the advantages of certain health resorts, but this has not been undertaken in any such a systematic way as is being done in continental Europe.

Very frequently medical men advise patients to go away from home for the benefit of their health, but usually the physician has little personal knowledge of the places to which the patients go, and he is often unable to give any but the most general directions as to what they should do when they reach their destination. Patients are sent to springs of various kinds because the waters are said to be good for certain diseases, but very often the physician is unacquainted with the composition of the water in question and with the way in which it is supposed to exert its influence. At such places one may see persons drinking powerful wafers, little knowing the effects which should follow their use, and with no medical direction. Many patients have been sent to places in the far west in the hope of favoring recovery from tuberculosis, only to become homesick and to return home disheartened after putting up with discomforts and privations which might have been wholly avoided if the patients had been sent to more appropriate places in the same region.

Carefully-planned and systematized tours for medical men could be arranged so that the springs, watering places, health resorts, etc., in a certain section of the country could be visited and pleasure be combined with the opportunity of gaining much useful information. The people who are financially interested in such re-

sorts and the transportation companies could well afford to bear the ordinary expense of such tours. As a result more patients would be sent to deserving places, and because of the increased knowledge of physicians as to the facilities and advantages of different springs, etc., patients would be sent to the places best suited to their particular cases and the results would be correspondingly gratifying. The planning and execution of such educational excursions would properly belong to the medical society, and the details would have to be worked out in each particular case. There seems to be no doubt that such trips might be of great value to all concerned, and just as profitable in this country as they seem to be in Europe.

A WISE JUDGE?

A Supreme Court judge in North Carolina¹ has decided that the practice of medicine and surgery in all its branches, as implied in the North Carolina medical practice law, consists solely in giving or prescribing drugs and performing surgical operations and that an osteopath and magnetic healer can not be considered as a medical practitioner under the law. It "can not be conceived," says this legal light, that the legislature would require one who eschews the use of drugs and surgery to pass an examination in anatomy, physiology, pathology, etc., which would be "useless knowledge to exact of an osteopath." This is in effect an intimation that any future legislation defining the practice of medicine, so as to bring osteopaths, magnetic healers, etc., under the law is impossible in the opinion of the Supreme Court; a sort of anticipatory judicial decision crippling the power of the legislative branch of the government, as a correspondent of the *Raleigh Post* points out. This is only possible by making it out unconstitutional, and what there is to justify it in the constitution of the state of North Carolina is beyond our knowledge. We shall watch with interest the future course of events in that state to observe how this judge-made fundamental law is taken by the law makers. The dictionary definitions that medicine is the science of healing and treatment of disease generally are ignored as well as their judicial recognition in other commonwealths. The English language, according to its standard interpreters, therefore comes under the condemnation of this spokesman of the Supreme Court of North Carolina. The medical profession in that state is, we believe, influential and numerous enough to bring about, if it tries, some legislation analogous to that in other states, defining the practice of medicine more in accordance with common sense and good usage than as laid down by this judicial authority, and it is to be hoped that the court as a whole may then give out a more creditable opinion.

MILLIONS FOR MEDICAL SCHOOL.

The extravagant statements with which the daily papers have been filled for the last few days regarding the new relationship between Rush Medical College and the University of Chicago, in which the writers play at battledoor and shuttlecock with millions, are, like the average so-called historical novel, founded on fact, and

1. See Medicolegal Department, p. 1278.

also like the historical novel, on very little fact. On account of possible misconception we mention briefly the progress and present status of the negotiations. For a considerable time Rush Medical College has been affiliated with the University of Chicago, and beginning with this year the first and second years' studies of the medical course have been taken at the university. The trustees of Rush Medical College, forecasting the increase in importance of the school, and appreciating the necessity of a permanent and sufficient endowment, without which their plans of increasing the length of the course of study and raising the standard could not successfully be carried out, early in the spring made a proposition to the university of organic union instead of affiliation, pledging themselves to raise the sum of one million dollars in case their proposition was accepted. The university considered the matter, approved it, and a few weeks ago presented it to the friends of the university in New York, who also signified their approval. It now remains only for the necessary legal steps as regard charter and so on to be taken by the trustees and for the promised million dollars to be obtained. It is not proposed that the name of Rush Medical College be lost, but that it be incorporated in the official designation of the university in some such way as "Rush Medical School of the University of Chicago." Of course, no one can say that eight million or eighty million dollars may not "ultimately be spent by the University of Chicago for building up Rush Medical College," but the facts just stated include all with which the authorities of the university and college are at present acquainted.

THE CORRESPONDENCE DIPLOMA MILL.

With the exit from business of the regular diploma mill of the Armstrong type, it must not be expected that the field is left unoccupied. As long as there is dupable material there will be found operators to work it up. One would think that the world would tire of being fooled, but until the weary cease from troubling them for their services the wicked will never be at rest. Among the circulars before us from concerns at present energetically seeking business we have one from Chicago which claims to be regularly chartered for the purpose of teaching the diseases of the eye, ear, nose and throat. It gives out its diplomas at the club rates of \$10 each, payable in five payments, semi-monthly, and the full and illustrated correspondence course of ophthalmic hypnotism thrown in for \$2.50 more. Residence or personal attendance is not necessary, as the instruction is given also by correspondence, and the circular naively says there is nothing about either diploma to indicate whether it was obtained by "correspondence" or a local course. It also furnishes "instructions how to advertise." Another institution reporting from South Bend, Ind., gives the degree of doctor of optics after a twenty-lesson correspondence course, at the club rates of \$7.50 to classes of 1,000. This looks as if its clientele had grown, as in its earlier circulars the same rates were offered to classes of 150, and the flooding of the country with \$7.50 "Doctors of Optics" is something rather serious to contemplate. It is of interest to note here in this connection that one of these concerns, the

Chicago one, claims that its correspondence course has been "openly endorsed by a number of medical journals," including among them the *Therapeutic Gazette*, *Medical Age* and *Medicine*. This, we think, must be a misrepresentation, as it is certain that our respected contemporaries would never have endorsed what is so evidently unethical as it appears to be from its circulars. It is possible that the merest mention is quoted as an endorsement; this is, indeed, suggested by an enclosed slip, attempting to make some general remarks by President Harper of the University of Chicago appear an endorsement of the course. Therefore, it is perhaps advisable for us to specifically and positively say that this notice is not an endorsement. If the medical authorities, the state boards of health and of medical examiners can not take up the matter, it might be one for the scrutiny of the postal authorities. These concerns certainly appear to be endeavoring to take in the public's money by advertising to give out wholesale a lot of diplomas and high-sounding titles with what must be pretty nearly a minimum of qualification.

THE SELF-ADVERTISING PRACTITIONER.

In a previous issue¹ we printed a clipping from a country newspaper which described the new equipment of a certain physician in such accurate terms that we expressed the opinion that the physician had assisted the editor in its construction. A number of correspondents have called our attention to what we are sorry to say is a too evident fact that some—not many we are happy to say—of the medical and surgical leaders of the great medical centers are not averse to similar newspaper notice. Some of our critics enclose newspaper clippings in support of their allegations. As an example, one correspondent calls attention to a two-column notice of the "Latest Triumph of American Surgery" in one of the best-known weekly lay publications of the day, where it appears with the portrait of a triumphant surgeon inserted between a champagne advertisement and others of Nabisco sugar wafers, Bee-man's chewing gum and Williams' shaving sticks. We have ourselves observed these things, and it pains us to think of the mortification such publications must give the eminent parties whose names are thus taken in vain. We remember a distinguished professor's lamentations over the sins of the reporters who, in spite of his expressed wishes, kept reproducing what purported to be verbatim interviews with him in regard to the notable features of his work that had an interest for the reading public. We are well aware that the newspaper man is ubiquitous, that his moral sensibilities are seldom fine enough to permit him to forego a scoop, and that any one who amounts to anything is liable to suffer at his hands. Those who are more distinguished will, of course, suffer more, but there are some who seem to suffer most, to have an idiosyncrasy, as it were, a special susceptibility to his attacks. There are some particularly shining marks who specially deserve the sympathy and condolence of the profession. Some men are born to be notorious, some achieve notoriety and some have it thrust upon them. No one can properly envy any one who has the misfortune of receiving the un-

1. THE JOURNAL, Oct. 11, 1902, p. 924.

ethical notoriety derived from what is, of course, undeserved and unauthorized newspaper puffery. For "Brutus is an honorable man; so are they all, all honorable men." But seriously, the contention of our correspondents is just. Criticism should be applied with equal force to him who stands high in the profession as to the unknown man of few friends and few attainments. There can be no two rules of conduct. If it is wrong for one physician to allow himself to be written up in the newspapers, it is wrong for another. The great city surgeon or physician whose conduct is dishonorable is a sad example to the country practitioner. The "leading lights" are supposed to lead in ethics as well as in diagnosis. If they do not, they are not leaders in a worthy sense. The fall of the tempted practitioner is often swift: surreptitious advertising, open display, exaggerated assertion, quackery. If he be encouraged in his course by his superior in skill, let the blame rest where it should. There is but one rule for both.

Medical News.

ALABAMA.

Alabama Medical College, Mobile, formally opened for the session of 1902-1903 with an address by the dean, Dr. George A. Ketchum, October 10.

Personal.—Dr. James M. Tubb, Bessemer, has been appointed company physician at the coal mines at Virginia.—Dr. Eugene D. Bondurant, Mobile, has been appointed a trustee of the Alabama Insane Asylum.—Dr. William M. Jordan, Birmingham, has become associated with Drs. J. D. S. Davis and W. E. B. Davis.

Birmingham Medical College Opens.—The ninth annual session of this college was opened, October 1, in the new college building, which has just been completed at a cost of \$30,000. Dr. Benjamin L. Wyman, dean of the college, delivered the opening address, and addresses were also made by President A. P. Montague of Howard College, and Drs. W. E. B. Davis and R. M. Cunningham.

COLORADO.

Maternity Re-opened.—The Denver Maternity and Woman's Hospital was re-opened, November 1, with a new corps of nurses, an incubator and a training school for nurses.

September Mortality.—During the month 819 deaths and 34 still-births were reported. The annual death rate was 17.02 per 1000. Typhoid fever caused 67 deaths, scarlet fever 7, and diphtheria 11.

Personal.—Dr. Frederick H. Welles, Victor, sustained a serious crushing injury of the right foot recently, in an elevator accident.—Colorado Sanitarium, Boulder, has secured the services of Dr. Howard F. Rand, Battle Creek, Mich., as medical superintendent.

Smallpox Quarantine.—At the semi-annual meeting of the State Board of Health an order was issued providing that the minimum period of quarantine for those suffering from smallpox shall be not less than four weeks from the beginning of the eruption, and in any case not less than ten days after sealing is completed.

Sanatorium to Remove.—The Rocky Mountain Industrial Sanatorium has given up its home near Barnum and will move to more commodious quarters near Denver. It is expected that the new sanatorium will be in running order by next spring. Tent life is one of the features of this home, and the Barnum location had not the space required for the tents and ground for cultivation. There have been 101 patients in the home, and probably this number will be greatly increased when the new home is finished.

DISTRICT OF COLUMBIA.

Many New Members.—At the October 1 meeting of the Medical Society of the District of Columbia, 55 new members were admitted.

Medical School Opens.—The medical school of Columbian University was opened October 1. Dr. Albert F. A. King,

dean emeritus, in his address reviewed the history of the school from the time of its organization in 1821 to the present time.

Post-Graduate School Incorporated.—Articles of incorporation for the Washington Post-Graduate Medical School were placed on record, November 1. The incorporators are: Drs. George M. Sternberg, Walter Wyman, Pressly M. Rixey, Robert M. O'Reilly, Alonzo B. Richardson, Samuel S. Adams, Edward A. Balloch, Swan M. Burnett, E. A. de Schweinitz, Joseph Taber Johnson, H. L. E. Johnson, George M. Kober, Sterling Ruffin, J. Ford Thompson, and William C. Woodward. There will be 104 professorships established: Six of preventive medicine, two of medical zoology, one of protective inoculations and serum-therapy and biochemistry, two of sanitary chemistry, eight of bacteriology, seven of pathology, fourteen of internal medicine and therapeutics, one of surgical anatomy, fourteen of surgery, six of military medicine and surgery, two of orthopedic surgery, nine of gynecology, six of obstetrics, two of mental and nervous diseases and electro-therapeutics, three of tropical diseases, four of diseases of children, two of diseases of the stomach, eight of diseases of the eye, eight of diseases of the nose, throat and ear, four of special diseases, and four of diseases of the skin.

ILLINOIS.

Cook County and Chicago.

Smallpox in Cook County.—In and adjacent to Evanston, a suburb immediately adjoining Chicago, and with a population of less than 20,000 by the last national census, there are now more than 40 cases of smallpox.

Bazaar for Lying-In Hospital.—A bazaar was held in the Palmer House parlors this week to furnish funds for the enlargement of the Chicago Lying-In Hospital and Dispensary, and for the establishment of a branch in the northwest district of the city.

Chicago Personals.—Dr. Arthur M. Corwin has been elected to the chair of physical diagnosis in the medical department of the University of Illinois.—Dr. D. A. K. Steele has so far recovered from his recent accident that he has resumed his professional work.—Dr. Henry F. Lewis has returned from Europe.

Needed Improvements at Cook County Hospital.—The county board will, it is hoped, at its next meeting, appropriate \$75,000 for a contagious disease ward, \$25,000 for a tuberculosis ward and \$25,000 for an alcoholic ward at the county hospital. Every ward at the hospital is crowded and the suggested improvements are urgently required.

Chicago's smallpox record during the year is remarkable, but it has been made so only through the constant reiteration of the virtue of proper vaccination. During the first ten months there were 310 cases, not one of which had ever been properly vaccinated. Out of the total number 4 died, 295 were discharged, and 11 remained in the hospital at the close of last week.

Chicago Deaths.—The total deaths for the week—469—are 30 more than for the previous week and 72 more than for the corresponding week of last year. This is equivalent to an annual death rate per 1000 of 13.43, and indicates an increase in the mortality rate of nearly 7 per cent. over that of the week before, and of more than 14 per cent. over that of the first week of November, 1901. The principal increase is in the deaths of those over 60 years of age from pneumonia.

County Institutions Crowded.—At the Dunning Insane Asylum nearly 1000 patients are compelled to sleep on the floor because of lack of space, and at the Dunning Infirmary similar conditions exist. It is expected that the county board, at its next meeting, will authorize the expenditure of \$350,000, divided as follows: Special building for convalescents, \$200,000; building for tuberculous patients, \$50,000; four additional cottages for insane patients, \$100,000.

INDIANA.

Dr. James E. Hibberd, Richmond, celebrated his eighty-sixth birthday, November 4.

Central Medical College Building Opened.—The new building of the Central College of Physicians and Surgeons, Indianapolis, was formally opened, October 31. Dr. Frederick C. Heath made the address of welcome.

Hospital for Sick Insane Ready.—The hospital for the sick insane, in connection with the Central Indiana Hospital for the Insane, Indianapolis, which has been erected and

equipped at a cost of \$132,000, was opened, November 5, for the admission of patients.

Flower Mission Hospital Begun.—Ground was broken, October 28, for the new hospital for incurables, advocated by the Flower Mission, Indianapolis, and rendered possible by the gift of \$5000 by an anonymous donor on the condition that a similar amount be raised by the mission.

Tuberculosis, in September, caused 338 deaths. Of these 141 were males and 197 females; 31 died under 5 years; 5 between 5 and 10; 6 between 10 and 15; 40 between 15 and 20; 52 between 20 and 25; 36 between 25 and 30; 36 between 30 and 35; 17 between 35 and 40; 23 between 40 and 45; 22 between 45 and 50; 18 between 50 and 55; 12 between 55 and 60; 15 between 60 and 65, and 27 beyond that age.

Out-of-Door Treatment for Tuberculosis.—According to the secretary of the State Board of Health, at least 15 Indiana consumptives who began the open-air treatment during the summer, will continue to live and sleep out of doors this winter. A few of them are having open-air houses built. These outdoor houses are frame, and consist of but one room, and it is entirely open on one side. A short strip of canvas, used as an awning and not a covering for the open side, is arranged to keep out the snow and rain, but not the air. Some will spend the winter on open porches or in tents.

IOWA.

Cornerstone Laid.—The cornerstone of the new St. Thomas Hospital, Marshalltown, was laid by Archbishop Keane of Dubuque, October 22. The hospital, when completed, will have cost about \$30,000.

Forty Years in Practice.—Dr. Joseph C. Krejci, Sioux City, celebrated the fortieth anniversary of his entry into professional life, November 3, by a dinner, at which he was presented with a gold-headed cane.

Unrecorded Physicians Arraigned.—The October grand jury summoned before it many Dubuque physicians who had neglected to file certificates with the county recorder, as required by law, and as a result, it is believed that none of the city practitioners is now unregistered.

Ellsworth Hospital Opened.—The new Ellsworth Hospital, Iowa Falls, has been formally opened. At the opening ceremonies addresses were made by Mayor J. H. Funk, Iowa Falls, and Drs. Daniel W. Crouse, Waterloo; Joseph L. Powers, Reinbeck, and J. Clinton Powers, Hampton.

No Certificate for Crofford.—The State Board of Health, November 5, decided to refuse to suspend the order revoking the certificate of Dr. J. W. Crofford, Lamoni, who some months ago was sentenced to a term in the penitentiary for murder resulting from a criminal abortion. He appealed to the Supreme Court, and the appeal is pending. Following his conviction his certificate to practice medicine was suspended. Dr. Crofford was released on bail pending the decision of his case by the Supreme Court. He took the ground that the Board of Health should not have suspended his certificate until it was settled by the Supreme Court whether he was justly convicted by the trial court. The board, however, has concluded to maintain its position, and the order of revocation stands.

KANSAS.

Resolutions Regarding Dr. May's Death.—At a meeting of the faculty of the College of Physicians and Surgeons, Kansas City, and at a meeting of the trustees of the same institution resolutions were adopted eulogistic of the late Dr. James W. May.

Personal.—Dr. Charles E. Caswell, Santa Fe surgeon at Holliday, fell from a train at that place, October 28, and fractured his right shoulder.—Dr. George H. Hoxie, Lawrence, has been appointed associate professor of anatomy in the University of Kansas, vice S. W. Willison.—Dr. Charles Lowry, Topeka, has been elected secretary of the State Board of Health, vice Dr. William B. Swan, deceased.

Washburn-Kansas Merger.—It is now reported that the merger of Kansas Medical College and Washburn will soon be fully consummated. The only question about which there has been any discussion is the retention of its own identity by the medical college. The medical college authorities desired that the college should be known as "The Kansas Medical College, the Medical Department of Washburn College," and while there was originally some opposition to this on the part of the Washburn trustees, they have now given their assent to it.

MARYLAND.

Robbery.—The residence of Dr. Henry W. McComas, Oakland, Allegheny County, was robbed November 4.

A memorial window in honor of the late Dr. William W. Duvall, Bowie, has been erected in Holy Trinity Church, Prince George's County, by his friends.

Smallpox on Elliott's Island.—Dr. John S. Fulton, secretary of the State Board of Health, reports an outbreak of smallpox on Elliott's Island, two men and a woman having the disease, supposed to have been brought from Bridgeville, Del.

Baltimore.

Death and Disease.—There were 166 deaths in the week ended November 7, of which only five were from typhoid fever. Measles and diphtheria are the most prevalent infectious diseases.

Friedenwald Memorial.—Memorial services in honor of the late Dr. Aaron Friedenwald were held at the McCulloh Street Synagogue November 9. Addresses were made by Rev. Drs. Mendes of New York and Schnuberger of Baltimore, and Cyrus Adler of New York, while the medical career of the deceased was discussed by Dr. Solomon Solis-Cohen, Philadelphia.

Personal.—Dr. John C. Hemmeter has been elected president of the Book and Journal Club, and Dr. John Whitridge Williams president of the Johns Hopkins Hospital Medical Society.—Dr. H. Clinton McSherry is in Paris.—Dr. Herman Brulle has been appointed medical agent for the southern district to treat the indigent sick in place of the southern dispensary.

The Vaccination Law.—The health commissioner of Baltimore, Dr. Bosley, has issued 100,000 blanks with the following notice: "The law directs that children be vaccinated before they are one year old. Parents and guardians are held responsible for failure to comply with this law. The law also provides that every citizen shall be vaccinated at least once. You will please see that the law is complied with in your family immediately. The vaccine physician of this ward is to be found at — street, office hours —, where he may be seen, or a postal card sent to the Health Department requesting a physician to call will receive prompt attention." This notice will be served on every householder in the city. The action is the result of a recent case of smallpox of a very mild type in Cumberland, which was not recognized, and in consequence 12 or 13 cases resulted from it.

Establish Memorial Lectureship.—Dr. and Mrs. Christian A. Herter of New York City have given \$25,000 to Johns Hopkins University for the foundation of a memorial lectureship in the medical department "designed to promote a more intimate knowledge of the researches of foreign investigators in the realm of medical science." This end is to be secured by inviting each year some eminent worker in physiology or pathology to deliver one or more lectures at the university on some subject with which he is especially identified. The lecturer will receive an honorarium, the annual income of the endowment fund. The committee to select the lecturer will consist of Drs. William H. Welch, William Osler and John J. Abel, and it is intended to continue this committee so as to represent pathology, physiologic chemistry and clinical medicine. There is no bar to extending the proposed lectureship to leaders in medical research in America if deemed advisable. Dr. Herter was a graduate student at the university in 1887-88, pursuing a special course in Dr. Welch's laboratory. He holds a chair in University and Bellevue Medical College, New York, and is a well-known contributor to the literature.

MASSACHUSETTS.

Bequest to Boston Hospital.—For a building, to be known as the Lamont G. Burnham Ward, \$150,000 is left to the Boston City Hospital by a codicil of the will of Lamont G. Burnham, ex-president of the Chamber of Commerce, who died at Manchester recently.

Officers and Staff Re-elected.—At the annual meeting of the trustees of Framingham Hospital, October 16, the old board of officers, staff and committees were re-elected. The vacancy on the consulting staff caused by the death of Dr. Zabdriel B. Adams, was not filled.

Endowment Depends on Merger.—The Lowell General Hospital and the Corporation Hospital of that city are to be merged into one institution, an endowment fund of \$100,000 having been promised by an anonymous benefactor on condition that the merger be effected.

Damages Against Physician.—In a suit recently decided in the Superior Court, a woman who had brought suit to recover \$5000 damages suffered by reason of the alleged negligence of the defendant, a physician and surgeon, of Boston, whom she had employed professionally, \$2000 damages were allowed the plaintiff.

Dr. Zakrzewska Eulogized.—A unique function in Boston, October 29, was a meeting held in memory of Dr. Marie E. Zakrzewska, founder of the New England Hospital for Women and Children. It was in reality a celebration of the advances made by women in medicine, and particularly the growth of hospitals for women, conducted wholly by women, though the subject matter of the proceedings was largely eulogy of the first great New England woman physician.

Decrease in Death-Rate.—Dr. Samuel W. Abbott, secretary of the State Board of Health, comments on the decrease in the death-rate in the state and its causes. The average annual death-rate for the past 50 years was a little over 19 per 1000, never rising higher than 22.8 per 1000, in 1872, and never until 1901 has it fallen below 17 per 1000. There has been a substantial drop in the death-rate from 20.8 in 1892, to 16.8 in 1901. If no great epidemic occurs before Jan. 1, 1903, the indications are that the death-rate of 1902 will prove to be as low as, if not lower, than that of 1901. The causes which he considers operative are the improved method of treatment whereby the death-rate from tuberculosis, typhoid fever, scarlet fever, whooping cough, puerperal fever and diphtheria has been decreased; the better organization of local health boards, with sanitary inspection and laboratory work, and finally to the change in the age-constitution ratio.

MICHIGAN.

To Combat Smallpox.—The Detroit Common Council in special session, October 31, instructed the city controller to audit bills of the Health Department to the extent of \$20,000 to meet the bills for the purpose of general vaccination and other expenses necessary to the prevention of the spread of smallpox.

The Most Dangerous Communicable Diseases.—Meningitis was reported present in Michigan during October, at 6 places; smallpox at 34 places; whooping cough at 35 places; measles at 42 places; diphtheria at 71 places; scarlet fever at 148 places; typhoid fever at 173 places, and consumption at 241 places. Meningitis was reported at 1 place less; smallpox at 5 places less; whooping cough at 3 places more; measles at 3 places less; diphtheria at 19 places more; scarlet fever at 45 places more; typhoid fever at 4 places more, and consumption at 10 places more, in October, than in the preceding month.

Personal.—Dr. and Mrs. Corydon M. Ryno, Benton Harbor, have returned from Europe.—Dr. William C. McCutcheon, Cassopolis, has been re-appointed physician of Cass County.—Dr. Willis Earle Chapman, after service in the Philippines, has returned to Sparta, via Europe.—Dr. Percy E. Wagar, formerly of Three Rivers, has been appointed secretary of the province of Benguet, Philippine Islands.—Dr. Johnston B. Kennedy, Detroit, left for Europe, October 28. He was tendered a banquet at the Russell House the previous evening. He expects to remain abroad until next spring.

Comparative Health of Michigan.—For October, compared with the preceding month, scarlet fever and diphtheria were more prevalent; and diarrhea, cholera morbus, inflammation of bowels, dysentery, remittent fever, cholera infantum, measles and smallpox were less prevalent. For October, compared with the average for October in the 10 years, 1892-1901, diphtheria, scarlet fever, whooping cough, measles and smallpox were more than usually prevalent; and diarrhea, typhoid fever, consumption, intermittent fever, cholera morbus, inflammation of bowels, dysentery, erysipelas, remittent fever, and cholera infantum were less than usually prevalent. The decreased prevalence of diarrhea and of the other diseases which prevail during the summer and fall months, may have been due to the unusually cold and wet weather of the preceding month.

Appeals to Supreme Court.—Dr. Peter Radabaugh, a graduate of the Miami Medical College, aggrieved at the refusal of the State Medical Board of Registration to grant him a certificate to practice medicine in Michigan, applied to the Supreme Court, November 3, to have an issue framed in which the facts in connection with the board's refusal could be determined. The court ordered a single issue settled. This was as to whether the board had arbitrarily refused to consider the question whether the college from which Radabaugh was gradu-

ated was a reputable college within the meaning of the law. The matter was referred to the Circuit Court for Ingham County for determination. The petitioner desires to have his certificate of graduation accepted as conclusive proof of his ability to practice medicine, and the state board claims that the college is not a reputable one within the meaning of the statute.

MISSISSIPPI.

Personal.—Dr. Hyman McM. Folkes, Biloxi, has been appointed a member of the State Board of Health, vice Dr. Benjamin D. Watkins, Natchez, resigned.—Dr. T. D. Bourdeaux, Meridian, has been appointed assistant physician at the East Mississippi Insane Hospital.

Status of Osteopathy.—The Supreme Court of Mississippi now has under advisement the question whether the osteopaths operating in the state are violating the laws regulating the practice of medicine. The question is brought up in the case of Hayden vs. State, appealed from the Circuit Court of Alcorn County, wherein the appellant was convicted of practicing medicine without license.

Improved Health of Mississippi.—The State Board of Health, at its annual meeting, reached the conclusion that the health situation of Mississippi was more satisfactory than it had been for several years. The reports of the county health officers show a notable absence of contagious and infectious diseases all over the state. A little smallpox remains in a few counties of the Delta, but this is gradually being suppressed, and in no section could it be regarded as epidemic.

NEW YORK.

New York City.

Propaganda Against Tuberculosis.—The Charity Organizations' tuberculosis committee has mapped out the following work of prevention, and even better results than those heretofore attained are hoped for: Investigation of the relation of the disease to overcrowding in infected tenements; publication by leaflets and lectures of the results of modern treatment; encouragement of the establishing of public and private sanatoria and relief of indigent consumptives by supplying proper food and lodging places.

Changes at Bellevue Hospital.—Dr. George T. Stewart, who has been superintendent of Bellevue Hospital, has been promoted to the new position of department superintendent, and his former deputy, Michael J. Rickard, who has been faithful to Bellevue for more than thirty years, has been appointed superintendent of that hospital. In his new position Dr. Stewart will have not only Bellevue, but Gouverneur, Fordham and Harlem hospitals under his supervision. An effort has been made by the trustees materially to raise the pay of orderlies and of various helpers in the hospital and to improve this part of the service. The inside of the old Bellevue Hospital Medical College building is now to be torn down and reconstructed as a modern dormitory.

Trance Ends in Death.—Mention has already been made of the young woman lying in a trance at St. Vincent's Hospital. After remaining in this state for thirteen days she was roused to consciousness for a short time, but lapsed again. However, she subsequently became conscious of her own accord, and told her mother that all she could recall was that she had gone to bed in her room and awakened to find herself in the hospital. After a trance lasting for twenty days the girl died in coma. The day before her death there was evidence of great exhaustion; the pulse rose from 136 to 156, and the temperature dropped to 100.8 F. The postmortem examination was made by Dr. Theodore C. Janeway, in the presence of a number of eminent physicians, after a number of tests had been applied to determine positively that death had actually taken place. A careful examination failed to find any gross lesion, and unless the microscopic study of the nervous system throws new light on the case its nature will continue to be in doubt.

PENNSYLVANIA.

Philadelphia.

Hughes Memorial.—Contributions are being made for the erection of a tablet at the Philadelphia Hospital in memory of Dr. Daniel E. Hughes.

Personal.—Dr. John H. Packard has returned from Europe.

Bequest.—By the will of the late Philip Jagode, a bequest of \$5000 for the founding of a free bed in memory of his wife was made to the German Hospital. Should his daughter die without children \$20,000 more will go to the same institution.

Typhoid Widespread.—For the week ended November 8 124 new cases of typhoid fever were reported. The disease is widespread throughout the city, there being only two wards free. The health authorities say that more than 500 cases of typhoid fever are now under treatment.

A Distinguished Visitor.—Dr. George C. Guillemin of Paris, chief of clinic to Dr. Raymond, Chareot's successor, recently spent several days in Philadelphia. He visited the Orthopedic, Philadelphia, Jefferson and University hospitals, and was entertained at dinner by Dr. Charles K. Mills.

The Keen-Wood Banquet.—At the banquet in honor of Drs. William W. Keen and Horatio C. Wood, November 6, Dr. John H. Musser was toastmaster. Dr. William Welch, Baltimore, proposed the toast "Medicine," to which Dr. Wood responded. Dr. William B. Coley, New York City, gave the toast "Surgery," to which Dr. Keen made response. Dr. J. Chalmers Da Costa spoke to the toast "The Pupil in Surgery," and presented Dr. Keen with a loving cup. Dr. Robert A. Hare replied to the toast "The Pupil in Medicine" and presented a loving cup to Dr. Wood. Among the 136 present were Drs. Abraham Jacobi and John D. Bryant, New York; Drs. Maurice Richardson, J. Collins Warren and Samuel J. Mixer, Boston; Dr. Allan McL. Tiffany, Baltimore, and Surgeon-General George M. Sternberg, U. S. Army (retired).

RHODE ISLAND.

Gift to Woonsocket Hospital.—Mrs. Chester B. Smith has donated the funds necessary to provide a new wing for the Woonsocket Hospital, which will include an operating room, emergency and anasthetizing rooms, etc.

Addition to Newport Hospital.—It is announced that Mrs. Cornelius Vanderbilt will provide an addition to the Newport Hospital, in memory of her husband. The new wing will cost \$100,000, and will be three stories in height, and 125 by 40 to 50 feet.

Personal.—Dr. Vernon M. Griswold, who some years ago removed from Fredonia, N. Y., to Westerley, has returned to his former home and resumed his professional work in Fredonia. —Dr. Mary Secord Packard, Providence, has accepted the position of resident pathologist at the New England Hospital for Women and Children, Boston.

GENERAL.

Many Post-Office Physicians Released.—By an order from the Postmaster-General, November 7, the position of post-office physician in all cities of less than 500,000 inhabitants is abolished as unnecessary. The saving to the government will amount to \$10,500 yearly. Ten physicians are released.

Trip to the International Medical Congress.—It is reported that many physicians will attend the International Medical Congress at Madrid, April 1903. Arrangements have been made for a party of physicians from the eastern states. The trip from New York and return will require about one month. Physicians and members of their families who join this party will be entitled to the special rate of \$265 for the round trip, including first-class passage on the steamer and railway, hotel accommodations for 14 days in Spain, including room, meals, all handling of baggage, special interpreter and fees. The trip will be via Gibraltar and Cordova to Madrid. There will be side trips to interesting parts of Spain at extra cost, and also returns by other routes for those who desire. Physicians in the eastern and middle states may secure more information from Dr. Ramon Guiteras, 75 West 55th Street, New York.

What Cities Lead in Disease.—The report of the U. S. Department of Labor gives health reports of many cities from which are taken the following summaries of the ten cities in which each disease named is most common:

Typhoid Fever.—Pittsburg, Minneapolis, Allegheny City, Kansas City, Louisville, Washington, Columbus (Ohio), Birmingham, Houston and Atlanta.

Malaria.—Houston, Memphis, Savannah, Charleston, Augusta (Ga.), Little Rock, Dallas, San Antonio, Wheeling and Montgomery. All it will be noted, in the South.

Scarlet Fever.—Knoxville, Salt Lake City, Denver, Boston, Pittsburg, New York, Reading (Pa.), Columbus (Ohio), Allegheny and Montgomery.

Diphtheria.—Minneapolis, Lowell (Mass.), Salt Lake City, Des Moines, Camden (N. J.), Hartford, Cleveland, Denver, Boston and Duluth (Minn.). New Orleans makes the best showing in this matter of any city in the Union.

Tuberculosis.—San Antonio, Schenectady (N. Y.), Rochester, Los Angeles, Mottla, Little Rock, Evansville, Troy, Washington and Houston. The presence of San Antonio and Los Angeles in this list will be understood as due to persons afflicted with tuberculosis prior thereto.

Pneumonia.—Birmingham, Troy, Worcester (Mass.), Saratoga (Pa.), New York City, Utica, Allegheny, Des Moines, Atlanta and Butte (Mont.).

Cancer.—Grand Rapids (Mich.), Portland (Ore.), Spokane, Rochester, Albany, Hartford, Cambridge, San Francisco, Oakland and Milwaukee.

Louisville may claim the title of the paralysis city, leading in that disease. Detroit in bronchitis, Rochester in heart disease, Cleveland in appendicitis, Albany is the center of Bright's disease for the country, but New York follows closely. Pittsburg kills most people by accidents, while San Francisco has a suicide record unequalled anywhere in the world and leaving Paris far behind.

The Naval Medical School was opened November 3. Medical Director R. A. Marmion, U. S. N., president of the faculty, made the introductory address to the class, giving the history of previous attempts to establish a school, the necessities therefor, and the scope of its projected work. Remarks were also made by Ex-Surgeon-Generals Gunnell and Van Ruyven and Dr. S. S. Adams, president of the Medical Society of the District of Columbia. The school is essentially post-graduate in its nature, and starts its instruction with the assumption that its students have received a thorough training in the general principles of the chief medical branches. The students are those already belonging to the Navy. The course will cover five months. The following is the faculty and the list of subjects to be treated by them:

Hygiene (of ship, camp and hospital) and Quarantine, Medical Director R. A. Marmion.

Duties of Medical Officers, Medical Inspector John C. Boyd.

Military Diseases and Tropical Medicine, Surgeon John W. Ross.

Military Surgery, Surgeon A. C. H. Russell. (In this course the Hospital Corps drill is included.)

Bacteriology and Chemistry, Surgeon E. R. Stein.

Ophthalmology, Passed Assistant-Surgeon T. D. Myers.

Instructions in Signals, Manual of the Sword and Extracts from Tactics, by an officer not yet designated.

Naval Law, Mr. E. P. Hanna, solicitor of the Navy Department.

The school occupies a portion of the buildings formerly used as the Naval Observatory, which have been remodeled in order to adapt them to the requirements of the new work just undertaken. The following assistant surgeons compose the class:

Beckmann, R. A., and Strize, H. F., Pennsylvania; Munson, F. M., Delaware; Brown, E. M., California; Hoyt, E. E., New Hampshire; Traynor, J. P., Maine; Baker, M. W., Virginia; McCoway, J. H., Kentucky; Neilson, J. L., Shaw, H., and Janness, B. F., Massachusetts; and Michaels, R. H., Illinois.

International Congress at Madrid.—The American Committee of the Fourteenth International Medical Congress announces that the following list of sections has been authorized:

1. Anatomy (Anthropology, Comparative Anatomy, Embryology, Descriptive Anatomy, Normal Histology and Teratology).
2. Physiology, Physics and Physiologic Chemistry.
3. General Pathology, Pathologic Anatomy and Bacteriology.
4. Therapeutics and Pharmacy.
5. Internal Pathology.
6. Nervous Diseases, Mental Diseases and Criminal Anthropology.

7. Pediatrics.
8. Dermatology and Syphilis.
9. General Surgery.
10. Ophthalmology.
11. Otolaryngology and Rhinology and Laryngology.
12. Odontology and Stomatology.
13. Obstetrics and Gynecology.
14. Military and Naval Medicine and Hygiene.
15. Hygiene, Epidemiology and Technical Sanitary Science.
16. Legal Medicine and Toxicology.

Subscriptions (25 francs, which is about \$4.75) must be paid before the opening of the congress to the general secretary, Faculty of Medicine, Madrid, and members should on paying the subscription state the section or sections to which they wish to belong. The Spanish committee of entertainment announces that the daily charge per person for lodging, service, light and three meals is, in hotels, from \$2.50 to \$7.00, and in private houses from \$1.75 to \$4.25. These sums include transportation from the station to the lodging and from the lodging to the station. As it is expected that Madrid will be crowded those who are to attend the congress are advised to apply for rooms as soon as possible to the Bureau des Logements, Faculté de Médecine, Madrid. Blank forms for these applications may be obtained on request from the secretary of the American committee. The Spanish committee on transportation makes no provision for trans-Atlantic travel. Their arrangements are made for receiving visitors at the port of entry and for transportation to Madrid. The French and Spanish railroads have granted delegates a general reduction of one-half on the fares. In the United States the Trans-Continental Passenger Association advises delegates to use the regular nine months' rate from Pacific points to Missouri River points. The American secretary is Dr. John H. Hoffmann, 125 W. 80th Street, New York.

CANADA.

Toronto Vital Statistics.—According to the returns issued by the City Clerk of Toronto, the number of births so far this year up to the 1st of November totals 4095, the number of marriages 1950, and the number of deaths 2685, as compared with 3579 births, 1762 marriages, and 2382 deaths for the corresponding ten months of last year.

To Report the Tuberculous.—The Board of Health of the city of Hamilton, Ontario, is considering a by-law to compel the reporting of all cases of tuberculosis to the medical health officer. Its passage has been recommended by the medical health officer, the Hamilton Medical Society and the mayor of the city.

Nova Scotia Sanitarium for Consumptives.—The provincial government of Nova Scotia is asking for tenders for the erection of a building for the purposes of a sanitarium for consumptives. The building, which is to be located at Kentville in King's County, will be two stories and occupy a frontage of 115 feet, and is to be built of wood. It will be fitted up with all the most approved modern improvements, and when completed will afford accommodation for some fifty patients. There will be a resident medical officer in charge.

Cataloging Canadian Scientific Literature.—Medical college authorities are coöperating in an undertaking by means of which it will be possible for scientific men to keep abreast of the scientific literature of the age. At the convention of scientific workers held at London in 1896, it was decided to establish an annual scientific catalog. Canadian publications will be cataloged by the following: Pharmacology, experimental pathology and bacteriology, Professor Adami of McGill University; human anatomy, Professor Primrose of Toronto University; physiology, Professor A. B. MacCallum of Toronto University, and botany, Professor Penhallow of McGill.

Keeping the Plague Out of Canada.—Dr. Montizambert, director-general of public health, Ottawa, states that Canada's immunity from the plague is due to the rigid system of quarantine observed. Not a single case so far has been reported at the William Head Quarantine Station on Vancouver Island. In addition to this the Canadian Pacific Railway authorities are very particular in inspecting Chinese passengers, boarding their vessels at Hong Kong and other ports. Referring to smallpox, which is epidemic in some parts of the western states, the director-general states it has been largely reduced, to such an extent that the staff of inspectors along the boundary line in British Columbia has been withdrawn for the present, except at a few points.

Scarlet Fever Serum Discovered.—Dr. G. A. Charlton, Rockefeller fellow of pathology at McGill University, is said to have just established some important results in the treatment of scarlet fever. Dr. Charlton gives the details of the serum which has been discovered by him in the current issue of the *Montreal Medical Journal*, and of 15 severe cases which he has treated, 13 made prompt recoveries almost free from complications. Of the 2 patients who died, 1 succumbed within five hours after admission, and the other was attacked with diphtheria, of which it died. The results noted in the treatment were a rapid subsidence of the fever, and absence and marked amelioration of suppuration in the middle-ear, and rapid convalescences.

Notre Dame Hospital, Montreal.—At the annual meeting of the board of governors of the Notre Dame Hospital, Montreal, held last week, it was stated that a new hospital with all the modern improvements, would be erected next spring at La-fontaine Park. Dr. E. P. Lachapelle, who was again elected superintendent, made the annual medical report. There have been treated within the last year 2132 cases, against 2200 for the previous year, the decrease being in every department except the gynecologic, where 33 more patients had been attended. The total number was divided into 1285 men and 847 women; the daily cost of each patient per day was 91 cents; 1813 were discharged as cured or improved; 185 were discharged with amelioration in their symptoms; 91 died in the wards, and 45 were brought in either dying or dead. This gives a mortality of 6.10 as against 6.09 for the previous year.

FOREIGN.

The cholera record in Egypt, from November 1 to 8, was 141 cases and 132 deaths.

Finland Women May Be Pharmacists.—By an official decree the profession of pharmacy has been thrown open to women in Finland.

Much smallpox in Barbadoes is reported. A week ago the total number of cases was 1200. The other islands are enforcing a strict quarantine against Barbadoes.

The Antimorphin Suit in Germany.—The *Deutsche Med. Woch.* published recently an article signed by Lewin containing an unfavorable criticism of antimorphin. The author and the editors of the journal were sued for damages by the proprietor. It has since transpired that antimorphin contains a considerable proportion of morphin and that the price is out of all proportion to the cost of the materials. The suit was dismissed.

To Prevent the Introduction of Ankylostomiasis.—The authorities at Trieste have issued a circular warning physicians and officials to be on the lookout for cases of ankylostomiasis in Italian workmen returning from Brazil. Instructions are appended in regard to the differentiation and prophylactic measures to be instituted. Compulsory notification of each case and strict isolation of the patient are required.

Professors Ribbert, Orth and Aschoff Transferred.—When Professor Orth of Göttingen was summoned to Berlin to take the chair left vacant by Gebhardt's death, Ribbert of Graz was invited to Göttingen in his place. Aschoff of Marburg is to take Ribbert's place. Aschoff has contributed a number of works to the literature on pathologic anatomy, and has also published recently a handbook for the easy study of the history of medicine.

Incomes of Medical Men in Paris.—The *British Medical Journal* says that there are said to be 2,600 medical practitioners in Paris; of these 40 have a gross income of \$40,000 to \$60,00; 50 of \$20,000; 50 from \$10,000 to \$20,000; 200 from \$6,000 to \$10,000; 200 from \$4,000 to \$6,000, and 1,700 earn on an average \$725, annually. In the whole of France, outside of Paris, there are 1,600 physicians whose individual gross income averages less than \$550.

The Continental Anglo-American Society.—This association of English-speaking physicians, residing in Europe and northern Africa, holds an annual meeting and banquet usually in October—this year at Paris. Next year they will meet at the same time and place as the British Medical Association. Dr. Bull of Paris is secretary, and Dr. Brandt of Nice, president. The objects of the society are mainly social and to serve as a professional link between the widely scattered members.

Trained Nurses in Germany.—The trained nurses of Germany are agitating a petition to the government to grant them an official examination after a three years' course of training, and a certificate for successfully passing the examination. This certificate can be withdrawn by the authorities in case of unworthy conduct on the part of the graduate. They also demand that the government should not appropriate funds for the support of hospitals which exact more than eleven hours of service from the nurses and which have not made adequate provision for pensions in case of old age and sickness. The government is also petitioned to supply means for an official three years' course of training.

The Campaign Against Charlatans in Germany.—The German laws do not condemn a charlatan unless he advertises what he knows to be false pretensions. Consequently the courts recently dismissed a suit against a quack as he seemed to be honestly convinced that his medicines or methods would accomplish all he claimed for them. The verdict stated that on account of the defective education and lack of previous special training, the accused was incapable of diagnosing cases correctly, and therefore had no intention to deceive when he asserted that he could cure them. The medical press comments on the utter perversion of justice in such cases, letting the quack go unscathed to further prey on the public, because of his ignorance, which should be the very reason for checking his career before he has done further harm.

The International Catalog of Scientific Literature.—This great undertaking commences with the literature of 1901. It is made possible by the co-operation of "regional bureaux" which collect all the scientific publications, pamphlets and articles in periodicals, published in their district and send the titles to the central office at London. The scope of the catalog embraces mathematics, mechanics, physics, chemistry, astronomy, meteorology, mineralogy, geology, geography, paleontology, general biology, botany, zoology, human anatomy, anthropology, physiology, pharmacology, experimental pathology, experimental psychology and bacteriology. A volume will be published annually in each of these branches of science, which it is seen embraces all of theoretical medicine. Each volume will be sold for \$5, and will contain the titles listed alphabetically by authors and subjects, in English, French, German, Ital-

dan or Latin. Purely scientific articles will be given the first place and then those on the borderland and technical articles that fall within the scope of the catalog. The financial support of the work is assured as the various governments interested have appropriated funds for the work of the local branches, and have also agreed to subscribe for a certain number of the completed volumes. Germany has appropriated nearly \$7,000 for the purpose for 1902. Twenty-eight countries have already made arrangements for the local co-operation. The number of periodicals to be reviewed is stated by the *Alg. Med. Ct.-Zg.* as 20 in Denmark, 55 in Holland, 31 in Japan, 28 in Norway, 19 in Portugal, 59 in Sweden, 6 in Southern Australia, 5 in Cape Colony, 41 in Canada, 197 in Italy, 435 in England, 853 in France, 1,255 in Germany and 1,500 in the United States. The entire work is the outcome and enlargement of the "Catalog of Scientific Papers" that has long been issued by the Royal Society of London. The total number of titles for the year now in press is estimated at 160,000. The volumes on botany and chemistry for 1901 have already appeared. Unless we are misinformed, the Smithsonian Institute has charge of the work in this country. The co-operation of Canada is mentioned in the Canada news of this issue.

LONDON LETTER.

Birth Palsy of the Sixth and Seventh Nerves.

At the Ophthalmological Society Mr. Nettleship described a case of this rare condition. Delivery was difficult in consequence of a brow presentation. The blades of the forceps were applied to the right mastoid region and in front of the left ear respectively. At birth the right eye was closed, and there were internal squint and spasms of the hands and arms. When three days old complete paralysis of the right face and internal squint were noticed. On the fifth day a small hemorrhage was detected in the right fundus below the disc. At the end of a month the paralysis had diminished, and after nine months it had disappeared. The injury was apparently a single intracranial hemorrhage at the base of the petrous bone involving the sixth and seventh nerves at that beginning where they are close together. Mr. Nettleship cited another case in which these two nerves suffered, but with separate lesions, the seventh by pressure of the forceps in the parotid region and the sixth by damage of the orbit. The eyelids in this case were swollen, and recovery was incomplete.

Ovarian Tumor Secondary to Breast Cancer.

At the Medical Society of London Mr. Bland Sutton described the case of a woman, aged 35, the mother of one child, whose right breast was removed in January, 1894. This was followed by recurrence three years and again four years afterward, for which excision was performed. In January, 1899, the left breast was involved and was removed. The patient remained well for two years, but in January, 1902, a tumor appeared in the abdomen, and was removed in March. Five gallons of fluid were removed in addition to a large solid ovarian tumor, exhibited. The tumor measured 7 inches in its two chief diameters, was dense, hard, and presented the typical microscopic structure of mammary cancer. The case was the most remarkable example of cancerous growth in the ovary secondary to cancer of the breast which has come under Mr. Bland Sutton's observation. The case raises the question of the frequency with which cancer attacks both breasts concurrently or after an interval of months or years. Both conditions are very unusual. Mr. Bland Sutton has come to the conclusion that when a woman has one breast removed for cancer she is five times more likely to have secondary deposits of cancer in one or both ovaries than in the remaining breast.

Correspondence.

The Immunization Treatment of Hay Fever.

NEW YORK, Nov. 1, 1902.

To the Editor:—At the last meeting of the American Laryngological Association, Dr. E. Fletcher Ingals of Chicago read a paper which you published in *THE JOURNAL* of June 28, 1902, concerning the immunization cure of hay fever. In this paper there are so many statements that are at variance with facts and so many misrepresentations in regard to myself, that I am obliged to ask you to publish this letter.

Ingals writes: "Dr. Curtis stated that by trying various substances he found that if a patient was rendered immune to one, he was thereby also made immune to some of the others. Curtis employed only the liquor ambrosia prepared by Fraser

& Co., the constituents of which are not given," and on page 1686, "Fraser's liquor ambrosia is a proprietary preparation, the constituents of which are not known to the profession; therefore, careful physicians will hesitate to recommend it, and when it is taken no one can know certainly to what its good or ill effects may be due."

In the same article he says: "As many patients are affected by the pollen from golden rod, it appeared to us best to use preparations from both this and ragweed, instead of relying on either one alone."

After describing the products of ragweed and golden rod he continues: "Before we discovered the preparations, the hay-fever season was so nearly on us that some of our patients were clamoring for relief. To one of these I gave Fraser's liquor ambrosia with careful instructions for its use, but he happened to be a man peculiarly susceptible to the influence of drugs, from some of which he had previously experienced, unpleasant symptoms. After taking a few doses of the liquid, his stomach was disturbed and he felt uncomfortable sensations, which appeared to him like those he had formerly experienced from taking an opiate; therefore, he declined to take it. As we were not familiar with the composition of this liquid, we could not urge its continuance, but within a few days we secured the preparations above referred to and decided to administer them together, but free from any other drugs, hoping thereby to obtain some accurate information for the benefit of hay-fever sufferers."

The entire tenor of his article makes it appear that he is doing a noble work with simple fluid extracts, and an insinuation is conveyed that I am using in my experiments a secret compound made by Fraser & Co. called liquor ambrosia.

My best answer to him is an extract from my article in the *New York Medical Record* of July 13, 1901: "The experiences narrated above prompted me last summer to obtain, through a drug firm, the services of a botanist to secure the flowers and pollen of enough ragweed to make an experiment on a large scale this year, on so-called hay fever, and to determine whether the hypothetical deductions from the experiments I have already conducted are truly as important as I believe them to be. The tincture and the fluid extract are the solutions most available. In my recent experiments I have discontinued the use of hypodermic medication. In the title of this paper the term hay fever is used in its popular sense, but the malady to which the treatment I have suggested applies is ragweed corasthma. I have several cases on record of golden rod and lily of the valley corasthma, which have been cured by *Solidago odora* and *Cavallaria majalis*, respectively, in three or four days; but, while these are interesting as contributive evidence, the old enemy, ragweed, is the recognized king of pollens, whose term of office begins August 12 to 20 in these latitudes and whose cruel reign is only ended by the first frost.

If my theory be correct, that this "rhinitis vasomotor periodica" or "corasthma ambrosia" may be prevented by giving from two to ten drops of the tincture or fluid extract of *Ambrosia artemisiifolia* t. i. d. in water, p. c., during the two weeks preceding the paroxysm, I shall consider that I have heralded what I believe to be an important discovery with becoming modesty. If, on the other hand, the results I have obtained are not verified by others, I may only say that greater men and more scientific observers have been misled by initial results that time did not substantiate. I should be pleased, however, to give to any physician who will conscientiously aid me in investigating the subject, such directions that he may experiment for himself on severe cases, in order that a collection of reports from disinterested physicians in widely separated localities may be of benefit to the cause of scientific research. In August, 1900, Fraser & Co., at my suggestion, combined the fluid extract of ragweed with aromatics in order to disguise its unpleasant taste and make it more palatable to the patient. With every bottle sent out, in reply to inquiries from the profession, a blank which read as follows, was enclosed," etc.

If, after reading my second year's report, published in the *New York Medical Record*, July 13, 1901, Dr. Ingals says that he does not know what the preparation liquor ambrosia con-

tains, and that it is a proprietary preparation unworthy of confidence, he states what is not true. I have told to every physician who has taken pains to inquire of me that the preparation made by Fraser is a fluid extract simply rendered more palatable by the addition of aromatics which are in the pharmacopeial sense drugs without chemical action and used as flavoring material.

In my investigation as to immunization of hay fever I have attempted to give every physician who has asked me for details the fullest directions and assistance, and have explained the manner of preparation of the tincture, the fluid extract and the liquor. What the particular aromatic flavoring extract was that Fraser used in the preparation of ambrosia, I never asked until I read the article of Dr. Ingals. I knew that the judgment of his chemist was better than my own as to what carminative aromatic would best disguise the unpleasant taste of the ragweed, and with every bottle dispensed was the explanation in Fraser's notes that it was the fluid extract of ragweed with aromatics.

As the medicine was used experimentally, I commenced with five drops to the teaspoonful, but later increased the dose to eight.

In my forthcoming report I shall tabulate the results in the treatment of some 8000 cases, and will in the future, as I have in the past, give to the profession every point it may wish to know. Had Dr. Ingals taken the trouble to write to me for the formula of liquor ambrosia, he would have received it.

In investigating the subject of immunization, in order to obtain exact results it was necessary to do two things: First, to have the flowers collected when the pollen was ripe, for I could not rely on the extracts I found on the market. Second, in order to know that cases treated were really treated with the fluid extract made from flowers in the proper stage of development, I was obliged to call my own preparation by a distinguishing name, simply for identification. Any preparation is proprietary when it bears the maker's name. Parke, Davis & Co.'s extract *Ambrosia artemisiaefolia* is proprietary—just as much as is Fraser's liquor ambrosia. In every chemical investigation we must first know the purity of our drugs. To this end I made every endeavor to make my experiment scientifically accurate. Until I announced my final results I did not care to have every druggist in the land put his own preparation on the market, and so I protected mine with a chemist's name. Certain safeguards have been found necessary by every careful investigator, to protect himself from exactly the style of medical plagiarism and captious criticism contained in the article above mentioned.

H. HOLBROOK CURTIS,

118 Madison Avenue.

CHICAGO, Nov. 5, 1902.

To the Editor:—I have carefully read and re-read Dr. Curtis' letter referring to my article in the issue of June 28, and I am unable to discover anything whatever to substantiate his statement that "In this paper there were so many statements that are at variance with facts and so many misrepresentations with regard to myself that I am obliged to ask you to publish this letter."

The Doctor seems to take special umbrage at my statement: "Fraser's liquor ambrosia is a proprietary preparation, the constituents of which are not known to the profession." He says further: "The entire tenor of this article makes it appear that he is doing a noble work with simple fluid extracts and an insinuation is made that I am using in my experiments a secret compound made by Fraser & Co., called liquor ambrosia."

In answer to the above, I submit a copy of the essential features of the label taken from a bottle of their preparation which I obtained this morning in an unbroken package from Fraser & Co.'s own drug store in this city. Beside this label the package contained nothing excepting a small blank reiterating the name, stating that cocain must not be employed as an adjunct, and suggesting that although the treatment had given great relief to a few cases on whom it had been tried, yet it was still in an experimental stage, and adding: "The physician who uses this bottle of medicine will confer a favor

by returning this blank, properly filled out, to Fraser & Co., who will acknowledge the same." Then follows a blank for the patient's name, age, and a few points concerning the attack and the patient's heredity, and whether or not he uses alcoholic beverages or smokes excessively, etc.

The label reads: "Liquor Ambrosia (Curtis) for the Prevention of Hay Fever." Following this is a statement that this preparation is used to immunize those affected by this disease, and that cocain must not be employed as an adjunct; also full directions for administration. (Observe the Doctor's noble purpose in furnishing his prescription gratuitously, at a dollar and a quarter a bottle for the medicine, to eight thousand suffering human beings.) Following this is the name and address of the firm. In fact the stuff is put up like patent medicines, in 8-oz. bottles, for sale directly to the public, and there is nothing whatever on the label excepting the ambiguous word "ambrosia" to give any clew to its contents.

Regarding my statement that it was a proprietary preparation, I quote from the latter part of the Doctor's letter: "I was obliged to call my own preparation by a distinguishing name simply for identification. Any preparation is proprietary when it bears the makers name. Parke, Davis & Co.'s extract *Ambrosia artemisiaefolia* is proprietary just as much as Fraser's liquor ambrosia." A proprietary preparation in medicine is correctly understood, and indeed is defined by Gould as "A medicine made by a private formula, sold under a copyrighted name, or the preparation of which is not free to the pharmaceutical profession." Parke, Davis & Co.'s extract *Ambrosia artemisiaefolia* is therefore not proprietary, as the formula is published outright on every bottle. The so-called liquor ambrosia (Curtis), on the other hand, is proprietary, as it is put up by Fraser & Co. and sold under a name that conveys no idea whatever of its real contents and without explanation of its formula despite Curtis' assertion to the contrary.

He states that with every bottle dispensed is an explanation that it is a fluid extract of ragweed with aromatics. In answer to this I may say that all who have had occasion to censor the advertisements offered to medical journals must have often observed this stock statement used by manufacturers who wish to conceal the composition of their preparations. No explanation that this was a fluid extract accompanied the package that I purchased to-day or any of the other bottles that I have seen.

He complains that I did not write him to learn its constituents. I did write him some months previously about the treatment, but did not receive a satisfactory answer. I did not write him, indeed I never write to any one to ascertain the composition of their proprietary preparations, for I am not interested in so-called medicines that are advertised without a formula of their constituents.

Inasmuch as my article gave full credit for whatever he had done, and did not contain a single sentence or phrase taken from any of his writings (excepting that taken from the pharmacopeias for which I gave them credit, and which possibly the Doctor forgot was not original with him), it appears that our amiable friend is hurling naughty names a little promiscuously in the last sentence of his letter.

34 Washington Street.

E. FLETCHER INGALS.

The Accuracy of European Retinoscopy.

CHICAGO, Nov. 1, 1902.

To the Editor:—In THE JOURNAL of Nov. 1, 1902, page 1107, Dr. Geo. M. Gould of Philadelphia uses the following language: "That there is probably not an 'ophthalmic surgeon' in all Europe who can use this method (retinoscopy) with accuracy shows how far we are as a profession from knowing our science, practicing our art, or doing our duty."

I admire Dr. Gould in all his scientific work and can follow his enthusiasm wherever it may lead, but I can not pass uncorrected such language from the editor of *American Medicine*, who has always advocated accuracy in language and diagnosis. To commit such an unpardonable sin of ignorance and unwarrantable discourtesy to foreign confrères, is to belittle his own argument. I have recently had the pleasure of a rather extens-

ive tour through some of the best of German university hospitals, and in nearly every clinic I saw retinoscopy practiced as a routine method, and instruction given to students by competent assistants in refraction with this method as a guide. Recent German periodic literature has numerous examples and illustrations of the method of teaching retinoscopy. At the Heidelberg Congress (August, 1902) Pflüger of Berne presented for approval the most elaborate apparatus I ever saw, and stated that it was only after use in his own clinic that he brought it to our notice.

In one private hospital—not belonging to a university and not used for teaching—the resident oculist spent over an hour a day in his dark room with the retinoscope estimating the refraction of the patients.

I have no doubt that the accuracy of these men would meet Dr. Gould's approval. Germans have long ceased to belittle the work of Americans, and we must avoid the error of supposing that what is done well here is therefore ignored or done ill there.

ALBERT B. HALE, M.D.

103 State Street.

COMMENT BY DR. GOULD.

PHILADELPHIA, Nov. 6, 1902.

To the Editor:—In reference to the courteous note of Dr. Hale I would say that in my opinion:

1. The best method of retinoscopy, when carried out by the most expert, is not trustworthy when subjective methods are possible with intelligent people.

2. No method of retinoscopy is accurate, not even the best one, except under cycloplegia. The Germans do not use cycloplegia.

3. The only use of retinoscopy advocated in my paper was for children. The Germans do not refract little children of from 2 to 6 years of age.

4. The great value of refraction is to diagnose and correct astigmatism. The Germans do not diagnose, correct or care for astigmatism, at least in those minor degrees, which produce the greatest eyestrain.

5. The method of retinoscopy used by the Germans is the old-fashioned one of Cuignet, which is utterly inaccurate and untrustworthy. The new method of Thorington, Jackson and other Philadelphia oculists is unknown, and their books untranslated in German.

6. It is not a question of "discourtesy" or "belittling." It is simply one of accuracy in statements. Mine were, and remain, absolutely true.

GEO. M. GOULD.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

REMEDIES FOR OBESITY.

RED CLOUD, NEB., Nov. 2, 1902.

To the Editor:—1. Is there a reliable remedy or treatment for obesity? 2. Is there any recent literature of any value on this subject?

R. F. R.

ANS.—1. No. Each case is a problem by itself. 2. Among the more important literature is the series of articles by Von Noorden in the *International Medical Magazine* during the past few months. Some of them are abstracted in *THE JOURNAL*. See *THE JOURNAL* of July 19 and September 20, pp. 168 and 725 respectively.

LIABILITY OF PHYSICIAN WHEN FREE SERVICE IS GIVEN.

CHICAGO, Nov. 6, 1902.

To the Editor:—Is a physician liable for injuries produced by electrotherapy (including x-ray) if services are rendered free—at a free dispensary? As I understand a lawyer is not responsible unless he collects.

W. C. E.

ANS.—A physician—or a lawyer—is as responsible for his acts when rendering his services gratuitously as when he receives remuneration for them.

PROCESS OF LAW AGAINST UNRECORDED PHYSICIAN.

NEW JERSEY, Nov. 10, 1902.

To the Editor:—There is a regular physician in this county who has been practicing for eight or nine years and has never been registered in the county clerk's office as required by law. Which is the proper way to go about it so as to have him comply with the law?

ANS.—Unless the state law of New Jersey exempts persons practicing before 1894 and the party in question comes under this provision, it would seem to be a case for the district attorney to investigate. The duty of lodging a complaint with him would seem to us to fall on the county medical society, though, of course, anyone might do so. Has the physician's attention been called to the oversight? Your county attorney can give you the exact law.

Book Notices.

TEXT-BOOK OF ANATOMY. Edited by D. J. Cunningham, F.R.S., M.D. (Edin. et Dubl.), D.Sc., LL.D. (Glasg. et St. And.), D.C.L. (Oxon.), Professor of Anatomy and Chirurgery, Trinity College, Dublin. Illustrated with 824 Wood Engravings from Original Drawings, Many Printed in Colors. Cloth. Pp. 1309. Price, \$1.75. New York: The Macmillan Co. 1902.

The medical student of to-day has a much broader range of choice in text-books than was the case a few years ago, and the text-books, moreover, are vast improvements on those that preceded them. This is true of all recent text-books on anatomy and of the present one in particular. While it may not be more generally convenient or better for the student than the later editions of Gray and Gerrish, it has the advantage of being in some respects a little more up to date. The editor speaks in his preface of the disadvantages of the composite work by different authors from the possibility of overlapping of subjects or differences of opinion, but we see nothing in the present work that would detract from its importance on these accounts. The different subjects are by authors of well-known reputation and are most ably handled. This work differs from others in its less conventional method of description and arrangement. Thus the topical relations of the viscera have been treated with reference to the most recent methods of hardening and preparation and the descriptions are decidedly the better for it. As for the special parts of the work we would speak of that on general embryology which in some respects is more complete and up to date in regard to the most recent discoveries than anything we have seen in the line of text-books of anatomy. The same may be said also of other parts. The illustrations are admirable, many of them schematic, and are the better for this reason. The use of color is introduced to a great advantage where it is employed. The book is one that can be honestly recommended.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS, Comprising Ten Volumes of the Year's Progress in Medicine and Surgery, Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume IX. Physiology, Pathology, Bacteriology, Anatomy. Pathology Edited by W. A. Evans, M.S., M.D., Professor of Pathology, College of Physicians and Surgeons, Chicago. Bacteriology Edited by Adolph Gehrmann, M.D., Professor of Bacteriology, College of Physicians and Surgeons, Chicago. August, 1902. Cloth. Pp. 212. Price, \$1.25. Chicago: The Year-Book Publishers.

This book consists of series of abstracts of articles that have appeared within a year or so of its issue, upon subjects connected with physiology, pathology, bacteriology, anatomy. We fail to understand why the names of W. T. Eckley and B. Fantus, authors of the sections on anatomy and physiology respectively, are not mentioned on the title page as well as those of the reviewers of pathology and bacteriology. The work seems well done as far as it goes. The careful reader will miss an author's index, which is especially desirable in works of this kind. In pathology the work of American investigators is given full share of the space. On the whole this volume compares favorably with its predecessors.

A TEXT-BOOK OF HISTOLOGY AND MICROSCOPIC ANATOMY OF THE HUMAN BODY, Including Microscopic Technic. By Dr. Ladislaus Szymonowicz, A.O., Professor of Histology and Embryology in the University of Lemberg. Translated and Edited by John Bruce MacCallum, M.D., Johns Hopkins University, Baltimore. Illustrated with 277 Engravings, Including 57 Plates in Colors and Monochrome. Cloth. Pp. 435. Price, \$4.75 net. Philadelphia and New York: Lea Brothers & Co. 1902.

This book in all probability will take its place among the first favorites of the text-books dealing with the subject of which it treats. There is no criticism to offer of the manner in which the subject is presented. Possibly the section on microscopic technic will be found rather short and not complete enough to replace satisfactorily special works on technic. The publishers have done their part well. The illustrations are all creditable, some being excellent. The translator and editor has given due attention to recent American investigations in histology and microscopic anatomy.

Marriages.

CHAUNCEY T. SCUDDER, M.D., to Miss Annie R. Auld, at Baltimore, October 29.

EDWARDS H. PORTER, M.D., to Miss Harriet Noble, both of Tiffin, Ohio, October 29.

ROLAND A. FELT, M.D., to Miss Florence G. Bullen, both of Perry, Okla., October 29.

CRAIG BARROW, M.D., Savannah, Ga., to Miss Alice Barker of Atlanta, Ga., October 30.

THEODORUS BAILEY, M.D., to Miss Alice Van B. Foos, both of New York City, November 1.

BENJAMIN HARBASON, M.D., to Miss Layla Kritz, both of Waveland, Ind., November 5.

WALTER LEE STRAUGHAN, M.D., to Miss Nelle Kritz, both of Waveland, Ind., November 5.

L. G. NOEL, M.D., to Miss Augusta Dickel Jonnard, both of Nashville, Tenn., October 30.

JAMES W. STONE, M.D., to Miss Virginia Lockett, both of Henderson, Ky., November 5.

J. EMMET LEAHY, M.D., to Miss Margaret Eugenie Slattery, both of Chicago, November 1.

CARL L. SPOHR, M.D., to Miss Hattie Wirthwein, both of Columbus, Ohio, November 4.

OSCAR L. HOLMES, M.D., Stewart, Ga., to Miss Cleo Aiken of Covington, Ga., October 22.

PHILIP FOX, M.D., Madison, Wis., to Miss Katherine Brigham of Milwaukee, October 29.

SAMUEL GORDON TODD, M.D., Neenah, Wis., to Miss Jennie Reyniers of Chicago, November 3.

ABRAM J. BARKER, M.D., to Miss Lucy Burr Wadhams, both of Torrington, Conn., October 28.

HOMER J. HALL, M.D., Franklin, Ind., to Miss Mary Hadley of Bloomingdale, Ind., November 6.

CHARLES M. JACOBS, M.D., Chicago, to Miss Helen Thalheimer of Richmond, Va., October 27.

Deaths.

Episcopal, Methodist, Children's and Pennsylvania hospitals, and gave especial attention to diseases of children. His contributions to the literature were numerous and valuable. Those especially noteworthy are those on diseases of the heart, typhoid fever, trichinosis, Paget's disease and visceral relations of tonsillitis. He was a member of the American Medical Association, the Association of American Physicians, American Pediatric Society, Philadelphia College of Physicians, Philadelphia County Medical Society, Philadelphia Neurological Society and president of the Philadelphia Pathological Society and the Philadelphia Pediatric Society. In 1901 he was elected a trustee of the University of Pennsylvania, and during the college year 1901-1902 lectured on therapeutics in the University of Pennsylvania, during the absence abroad of Dr. Horatio C. Wood. In addition to his exceptional professional talent which had already placed him among the foremost clinicians of the east, he possessed a singular charm of personality. In October he was attacked by typhoid fever, followed by appendicitis, for which an operation was performed. On October 31 perforation occurred, and the operation performed, therefore, was of no avail, as he died the next day from exhaustion.

Francis F. Davis, M.D. University of Michigan, Ann Arbor, 1867, a member of the American Medical Association, and one of the most eminent professional men of western Pennsylvania, died suddenly from organic heart disease, in Oil City, while making a professional call, October 31, aged 64. He was a native of western Pennsylvania; served during the Civil War as assistant surgeon of the One Hundred and Twenty-first Ohio Volunteer Infantry. At the close of the war he settled in Oil City. He was a member of the International Association of Railway Surgeons, Medical Society of the State of Pennsylvania, Venango Medical Society and Oil City Academy of Medicine.

Frank A. Holland, M.D. University of Minnesota, Minneapolis, 1886, for five years on the staff of hospitals in St. Paul and Minneapolis, then an assistant surgeon in the army for two years, and thereafter a practitioner of Dubuque, Iowa, died at his home in that city, October 29, from typhoid fever, after an illness of six weeks.

James Johnston Bell, M.D. Rush Medical College, Chicago, 1886, one of the founders of Kedzie Hospital, and one of the best-known practitioners of northwest Chicago, died at St. Luke's Hospital, November 4, after a long illness from gliosarcoma of the brain, for which he underwent an operation the day before his death, aged 41.

Robert C. Kedzie, M.D. University of Michigan, Ann Arbor, 1851, during the Civil War surgeon of the Twelfth Michigan Infantry, and for more than 40 years professor of chemistry at the Michigan Agricultural College, Lansing, died at his home in that city, November 7, aged 79.

W. Clark Allen, M.D. Northwestern University Medical School, Chicago, 1894, surgeon at the Kedzie Hospital, Chicago, died suddenly from hemorrhage of the lungs after alighting from a street car in front of the hospital, November 4, aged 37.

John James May Angear, M.D. Rush Medical College, Chicago, 1860, one of the founders and faculty of the College of Physicians and Surgeons, Chicago, died at his home in Chicago, November 8, from chronic endocarditis, aged 73.

Charles M. Bethauser, M.D. Starling Medical College, Columbus, Ohio, 1882, a well-known clergyman and physician of Columbus, died at his home in that city, October 30, from liver disease of long standing, aged 68.

Andrew J. Manville, M.D. Bellevue Hospital Medical College, New York, 1866, one of the oldest physicians of Bowling Green, Ohio, was instantly killed by being struck by an express train, at Custar, November 3, aged 68.

John H. Abbott, M.D. Jefferson Medical College, Philadelphia, 1872, an esteemed citizen and twice mayor of Fall River, Mass., died at his home in that city, November 1, from pneumonia, after a short illness, aged 54.

Gerard M. Muller, M.D. University of Utrecht, Holland, was found unconscious in his rooms at Grand Rapids, Mich., October 31, and was taken to Butterworth Hospital, where he died, November 3, aged 70.

Andrew J. Schmidt, M.D. McGill University, Montreal, 1886, died suddenly at his residence in Cedar Rapids, Iowa, from heart disease consequent on rheumatic arthritis, November 3, aged 39.

Robert L. Wood, M.D. Kansas City Medical College, 1873, son of the late Dr. Joseph Wood of Kansas City, died in that city, from fatty degeneration of the heart, October 31, aged 62.

John C. Drake, M.D. Western Reserve University, Cleveland, Ohio, 1868, died at his home in Oakley, Mich., November 1, aged 60.

New Instrument.

A WIRE LOOP FOR AURAL SNARES.

HAROLD WILSON, M.D.

DETROIT.

In using the snare for the removal of aural polypi, it often has to be rethreaded several times during a single sitting, a procedure which is always more or less tedious or annoying. I have devised a loop with the ends of the wire twisted so that it may be inserted into any snare with a single open canula with very little trouble. A piece of malleable steel wire No.



36 or 40 (about a foot in length for the Blake snare) is doubled and twisted (best in a small lathe, holding the loop end between the fingers), leaving the loop of any desired size. These loops are so very easy to make that they are inexpensive, and may be made up and kept on hand in sufficient numbers to have them always ready.

32 West Adams Avenue.

Medical Organization.

How to Encourage Scientific Work in County Societies.

The enthusiasm with which the work of organization is being taken up all over the country is certainly most encouraging, and it is not the time to throw cold water to cool off this enthusiasm. And yet it is the time to call attention to the fact that the work may all come to naught if we do not recognize the necessity of doing something to keep the majority of the county societies from becoming dormant, if not extinct, by making them of practical value to their members. The necessity of assistance from those outside of a county, in the creation of county societies, is now happily recognized and acted on by most of the state bodies. It must also be recognized that if these societies are to be made useful the same outside assistance must be kept up. Spasmodic efforts at organizing societies have been going on for years, and these have been temporarily successful. But once organized the weaker—and not seldom even the stronger ones—sooner or later died out.

The gardener who plants a flower and neither waters nor cultivates it would be considered very foolish. The flower might grow if the soil and environment were right.

There are various ways in which a society may be made advantageous to its members, and one of the most important is that it shall be of benefit as an educational institution and as a help in scientific work. It is in this that the state society should recognize its first duty. When the profession is well organized and the machinery for such work is completed, we may hope to see undertaken a sort of post-graduate work, something on the plan of the university extension movement, modified, of course—of which more in the future. At the present time, however, the adoption of some such work as outlined in these columns last week by Dr. Leartus Connor, should be immediately undertaken. In those states that have already organized, and have adopted the councilor system, this work should be undertaken by the councilors, and without waiting for instructions from the state body. It is their duty to assist in and help make effective the scientific functions of the county society. And in no simpler or more economical way can they do this than by getting these bodies to invite outsiders to aid them by reading papers, etc. The councilors should co-operate by getting volunteers to prepare papers on subjects of practical interest. There will be no trouble to get men to do this, and undoubtedly the societies would gladly welcome such outside aid in making their meetings interesting. There would be no objection to one read-

ing the same paper to a half a dozen or to a score of societies, and thus such a one would be encouraged to spend time in preparing something good to present. The invitation to take part in this work should not be limited to men with a reputation or to those living in a populous center, but, on the other hand, the country practitioner would in some respects be better. Let it be a mutual exchange of talent.

There is no need of argument to prove the advantage of such work. The more successful societies are doing it to-day. The largest county society in the country, the Chicago—Cook County—Medical Society, every few weeks invites men from other parts to read papers. Flourishing societies in Boston, New York, Philadelphia, Buffalo, Cleveland, Cincinnati and other large centers are continually inviting outsiders, and find it an attractive feature, but above all it brings new ideas, new inspirations. How much more is this needed in the smaller societies in the country districts! In societies of only twenty or thirty members—and not a third willing to prepare good papers—the necessity for outside inspiration is surely recognized by all. Even in the society with good workers the monotony of meeting the same men and hearing the same subjects discussed from the narrow viewpoint of a single locality is bound to result in a gradually decreasing attendance, and finally in total failure.

We sincerely hope that the councilors will take this matter up, individually if not collectively. In the states which have not reorganized, a "Committee on Scientific Work" should be created. But even in these states the president or secretary of the state society can take this work on himself; he need not fear to undertake it even if he has not been ordered to do so.

Let the good work begin now.

Medical Defense.

While we believe that there are functions belonging to medical organizations of more immediate consequence than the defense of its members against malpractice suits, nevertheless this is a matter of decided importance, and we are therefore glad to note that both state and county societies are taking it up. At the recent meeting of the New York State Medical Association that body adopted resolutions endorsing medical defense by its county branches. The Chicago Medical Society has a committee at work looking to the adoption of medical defense as one of its functions. The Philadelphia County Medical Society at its last meeting took up the work and adopted the following amendment to its constitution:

FOR MEDICAL DEFENSE.

Section 1. Within 15 days after the business meeting in January, the Board of Directors shall appoint an attorney-at-law for the term of one year, who, in addition to representing this society in and threats against its members as herein-
and the District Attorney in prosecuting ille-
and representing this society in other

ance with the conditions hereinafter named, assume the defense of suits for alleged malpractice brought against members of this society.

Sec. 3. The Board of Directors shall not undertake the defense of any suit based upon acts prior to the qualification of the accused as a member of this society.

Sec. 4. Any member desiring to avail himself of the provisions of this article shall first present his case to the Board of Censors, who shall decide upon the validity of the claim. He then may make application to the Board of Directors through the Secretary, shall sign a contract renouncing his own and vesting in the Board of Directors sole authority to conduct the defense of said suit, and shall make such other agreements as the Board of Directors may require. Provided, that nothing in the foregoing shall conflict with united action in the defense by the officials of any corporation organized for this specific purpose, with which a member may be connected.

Sec. 5. The Board of Directors shall thereupon contract with said applicant to take full charge of said suit, to furnish all necessary legal services, to furnish all medical expert services and to pay all necessary expenses of the accused. Provided, that if the accused is insured in a corporation organized for the legal and financial defense of physicians, the foregoing responsibility of the Board of Directors may be divided with said corporation. The Board of Directors shall not obligate the society to the payment of any damages awarded by decree of court or on compromise.

Sec. 6. The Board of Directors shall have authority to name the sum for the compensation of the attorney.

Western Central Medical County and District Society.

Physicians of Stevens, Big Stone, Wilkin, Traverse and Pope counties (Minn.) met at Morris, Minn., October 24 for the purpose of organizing a district medical society as a branch of the state society. Dr. Herbert L. Hulburd, Morris, was chosen president; Dr. Charles Christenson, Starbuck, vice-

president; Dr. Charles Bolsta, Ortonville, secretary, and Dr. James R. Elsey, Chokio, treasurer. The meetings will be held quarterly, the next one being held in Morris on the second Wednesday of January, 1903.

Genesee County (Mich.) Medical Society.

This society was organized October 28 at a meeting of physicians of the county held at Oak Grove Hospital, Flint, as a branch of the Michigan State Medical Society. Twenty-three physicians were enrolled as members and there were also in attendance two delegates from the Oakland County Medical Society. The following officers were elected: Dr. Charles S. Wheeler, Flushing, president; Dr. Lynch, Flint, vice-president, and Dr. Henry R. Niles, Flint, secretary and treasurer.

Gratiot County (Mich.) Medical Society.

About fifteen physicians of the county met at Alma October 30 and organized this society, to be a branch of the Michigan State Medical Society. Dr. Albert E. Bulson, Jackson, president of the state society, and Drs. Leartus Conner, of Detroit, and William T. Dodge, Big Rapids, members of the council of the state society, were present and assisted in the organization. Dr. George F. Butler, Alma, was elected president; Dr. Stiles Kennedy, St. Louis, vice-president, and Dr. Willard M. Weller, Ithaca, secretary and treasurer. Drs. Kennedy, Scott and Brainerd were appointed to draft a constitution and by-laws.

Nebraska.

At the last meeting of the Nebraska State Medical Society the matter of organization was discussed, but nothing could be done from the fact that the constitution could not be amended without the matter laying over for a year. However, a committee was appointed to revise the constitution and by-laws in accordance with the plan recommended by the American Medical Association, and also to take preliminary steps in organizing, if in the judgment of the committee it was thought best. This committee met November 6, at Omaha, and, after a thorough study of the work and a conference with members of the profession outside of the committee, it was decided to recommend the adoption of the Constitution and By-laws for State Societies prepared by the Committee on Organization of the American Medical Association, with certain minor modifications.

The work of organization has been taken up in several counties, although not as yet systematically. The Lincoln Medical Society, which for some years has been in a semi-dormant condition, recently passed a resolution to disband, provided a county organization was created. On November 4, the Lancaster County Medical Society was organized, to take the place of the Lincoln Medical Society. Over half of the physicians of the city and county joined at this first meeting, and it is expected that soon practically all of the eligible physicians of the county will be members of the county society.

On Tuesday of this week the Omaha Medical Society was to consider the advisability of changing its name so as to make it a county society and to reorganize.

Societies.

COMING MEETINGS.

Indian Territory Medical Association, Muskogee, Dec. 2-3, 1902.
Western Surgical and Gynecological Association, St. Joseph, Mo., Dec. 29, 1902.

Upper Des Moines Medical Society.—The next meeting of this society will be held at Estherville, Iowa, in February, 1903.

New York Celtic Medical Society.—This society, at its recent annual meeting, elected Dr. Thomas F. Reilly president, Dr. John J. McCoy secretary, and Dr. Michael C. O'Brien treasurer.

Asociacion Medica de Puerto Rico.—The medical men of the island met at San Juan, September 21, and formed this association, with Dr. M. Quevedo Baez, president; Dr. Jose N. Carbonell, secretary, and Dr. Rafael Valez y Lopez, trustee, all of San Juan.

Union District Medical Society.—This society met at Hamilton, Ohio, October 25, and elected Dr. William S. Alexander, Oxford, Ohio, president, and Dr. Walter D. Hancock,

Millville, Ohio, secretary and treasurer. The meeting for 1903 is to be held in Rushville, Ind.

Southern Kentucky Medical Association.—This association, which met at Hopkinsville, October 24, before adjourning, to meet next year at Bowling Green, elected Dr. Frank M. Stites, Hopkinsville, president; Dr. William W. Ray, Hopkinsville, vice-president, and Dr. Lee P. Trabue, Elkton, secretary-treasurer.

Buffalo General Hospital Alumni Association.—The ex-interns of the Buffalo General Hospital met at the Hotel Niagara recently and formed an alumni association. After a banquet, officers were elected as follows: President, Dr. DeVillo W. Harrington; vice-president, Dr. Peter W. Van Peyma; secretary-treasurer, Dr. William I. Thornton, and executive committee, Drs. Thomas B. Carpenter, Edgar R. McGuire, and Edwin R. Gould, all of Buffalo.

Tri-County (N. J.) Medical Society.—The fourth annual meeting and banquet of this society, which includes in its territory the counties of Wayne, Sussex and Morris, was held at Washington, October 14. The following officers were elected: Dr. Theophilus H. Address, Sparta, president; Drs. Isaiah W. Condict, Dover, and John C. Johnson, Blairstown, vice-presidents; Dr. Charles B. Smith, Washington, secretary, and Dr. Frederick W. Flagge, Rockaway, treasurer.

Albany American Academy of Medicine Club.—A division of the American Academy of Medicine was formed in Albany, October 29. Dr. Charles McIntire of Easton, Pa., the president of the academy, explained the scope and functions of the academy. During the evening a local division was organized by the election of Dr. James F. Barker as permanent president and Dr. Charles M. Culver as permanent secretary, who are constituted the executive committee with power to act. This is the first permanent division to be organized in America.

NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

Monthly Meeting, held Oct. 7, 1902.

The President, Dr. Wendell Reber, in the Chair.

Post-Diphtheritic Paralysis Affecting the Nose and Throat.

DR. CARLE LEE FELT read this paper, in which he divided the causal factors into three groups: the bacilli, the toxin and a by-product, the action of which is limited to the nerve tissue, called "toxone," the latter agent being accredited to Dr. Dundas Grant with being responsible for the paralyzes following the mild diphtheritic cases treated with antitoxin. The condition *per se* may also be considered under three headings: 1. Muscle degeneration. 2. Localized neuritis and degeneration. 3. Central nervous destruction and degeneration.

The most frequent site of this condition is the pharynx, 40 per cent. of the cases being confined to this region, and in 12 per cent. the palate and eye muscles are affected, while the muscles of mastication are very rarely involved or the senses of taste, hearing and smell impaired. The location of the membrane would seem to have very little influence over the extent of the paralysis. From observations made by Woodhead on 1,362 cases of post-diphtheritic paralyzes, the time of the onset of the disease would seem to be from 4 to 55 days, varying from 5 to 55 in the palate; 4 to 17 in the ocular-motor muscles; 5 to 10 in the heart, and 10 to 14 in other parts of the body, the duration extending from a few days to months and in rare instances no recovery taking place. The restoration of function depends on the nature and extent of the damage and the treatment of the case, the latter of which may be divided into preventive and curative measures.

That antitoxin prevents and does not cause paralysis is now generally conceded, and this opinion is borne out by the experiments on the lower animals. The ideal method of using this remedy is to inject it at the time the disease is acquired in a sufficient amount to completely neutralize the patient, but even this will not prevent the paralyzes caused by streptococcal infection, which is so often present. Strychnin, electricity, tonic baths, general massage, rest in bed, nutritious and easily assimilated diet and treatment tending to secure perfect action of the skin, kidneys and bowels are valuable adjuncts in the treatment of these conditions, but the use of local antiseptics was not thought to be of much import.

Post-Diphtheritic Paralysis Affecting the General Nervous System.

DR. LUTHER C. PETER stated that the frequency of the palsies is in direct proportion to the severity of the general infection, notwithstanding that occasionally a severe paralysis may follow a mild diphtheria. The most important etiologic factors are age and the location of the membrane, Gowers claiming that the largest per cent. of cases occur in adults, while the experience of other observers tend to a contrary opinion, the latter holding that most of the cases occur between the ages of 5 and 6 years. From the observations by Myers, it would appear that about one-fifth of the cases are followed by paralysis. That the paralysis may involve almost any portion of the body, particularly the nerves, spinal cord and brain; and muscles, especially the myocardium, is now pretty generally recognized, as is also the fact that the condition is caused by a toxin elaborated in the body by a diphtheria bacilli, the blood stream acting as a conveyance for the toxic agent. The localization of the paralysis can no doubt be explained by the proximity of the affected organ to the source of infection. Diversity of opinion exists as to whether the primary seat of the lesion is in the peripheral nerve or in the cord, and the more conservative view would seem to be that the entire neuron is pathologically affected, the change being perceptible only in the peripheral nerve.

The symptoms usually noticed during the second or third week of the attack, when convalescence has been fairly established, are progressive loss of strength, and wasting of the muscles of the extremities and trunk, if the latter is involved. In other cases, after the patient is up, may be observed regurgitation of liquids through the nose, nasal twang of the voice and difficulty in walking, which may terminate in the patient becoming bedridden, with loss of control of the bladder and bowels and paralysis of the respiratory muscles and heart. The knee-jerks are always affected, and their absence has been noted in all cases of diphtheria, with or without paralysis. Usually, however, the disease is not so severe, and is generally completely cured by four to eight weeks of rational treatment. Instead of being general the paralysis may be localized, in order of the frequency of their occurrence being palatal, ocular, cardiac and diaphragmatic. The cardiac affection is now thought to be secondary at least to functional disturbance of the vagi and possibly due to organic changes in the nerve structure, being most frequent between the ages of two and nine years and occurring from the second to the thirty-sixth day of the disease, the symptoms indicative of its onset being cardiac irregularity, bradycardia, tachycardia, a lowering of the temperature and vomiting. Eighty per cent. of the fatalities following post-diphtheritic paralysis are due to this variety of the disease. Diaphragmatic paralysis furnishes about 13.7 per cent. of the fatalities, occurring principally between 2 and 6 years of age, the symptoms being dyspnea, retraction of the upper abdomen during inspiration, weakness of the voice and a tendency to the accumulation of mucus in the trachea and bronchial tubes.

The important factors in the differential diagnosis of the condition are the history of a previous attack of diphtheria, the conditions present at the onset of the attack, the extent of the wasting, and in the cerebral type the preceding convulsion. The prognosis is usually good, the greatest mortality being in the cardiac and diaphragmatic cases.

In regard to treatment, antitoxin was thought to be the first and foremost remedy, its value as a preventive being fully established by the experiments of Rainy on guinea-pigs. Absolute rest in bed during the primary disease was considered imperative, and many of the cases of paralysis were felt to be due to premature activity on the part of the patient. The use of iron and strychnia internally, and in the cardiac cases of strychnia hypodermatically, was thought to be important.

Post-Diphtheritic Ocular Paralysis.

DR. P. N. K. SCHWEYK read a paper, in which he stated that the post-latent stage of diphtheria is almost invariably characterized by ocular paralysis. Few muscles are usually affected at the same time, the ciliary muscles being the most

commonly and the sphincter muscles the most rarely affected. Post-diphtheritic ocular paralysis is usually bilateral. Paralysis of the sphincter irides is rare.

These attacks are usually observed in from two to six weeks after the attack of diphtheria, and require about the same length of time for a cure, the prognosis being more favorable in the young than in the older patient. There is an inability to distinguish near objects and double vision may or may not be present. The severity of the primary disease bears no relation to the ocular paralysis, and in the author's opinion the condition is produced by the action of the toxins on the peripheral nerve centers.

Discussion.

DR. CHARLES W. BURR believed the chief causative factor in these cases of diphtheritic paralysis was multiple neurosis. Regarding prognosis, the most important factor to determine is whether it is a multiple neuritis or a cerebral affection, in the former case the prognosis being very good, while in the latter it is very poor. The most important feature in the treatment is absolute rest.

DR. R. W. BEMIS did not believe antitoxin should be used to the exclusion of everything else, as he felt that muscle changes take place as soon as the local manifestations are visible, thus the antitoxin can not be given early enough to secure the effect which is produced in the experiments on guinea-pigs, in which the diphtheritic toxin is injected and immediately followed by an injection of antitoxin. While he believed that antitoxin was an important factor in the cure of diphtheria itself, he felt that it had but little effect on the paralysis.

TRI-STATE MEDICAL ASSOCIATION OF ALABAMA, GEORGIA AND TENNESSEE.

Fourteenth Annual Meeting, held in Birmingham, Ala., October 7 to 9, 1902.

The President, Dr. John C. La Grande, Birmingham, in the Chair.

Welcome.

The delegates were welcomed to Birmingham by Mayor W. M. Drennen. On behalf of the Jefferson County Medical Society the association was welcomed by Dr. R. M. Cunningham, Big Sandy, Tenn., representing Dr. Cunningham Wilson, president of the county society, who was prevented from being present by illness.

Sociology.

The first day's sessions were taken up with sociologic questions.

DR. C. F. DOUGLASS, Douglassville, Ga., spoke of "Sociology and Industry." He descanted especially on the question of insobriety and presented arguments on the evil effects of alcohol and the methods of obviating this evil.

DR. DAVID L. WILKINSON, Montevallo, in a paper entitled "Some Further Remarks on the Medical Supervision of the Education of Boys and Girls," recommended that there be a physician on every educational board with a salary sufficiently large to warrant him in devoting a considerable portion of his time in looking after the health of the children.

DR. LOUIS EDELMANN, Huntsville, Ala., caused a good deal of discussion by his paper on "The Negro as a Criminal and His Influence on the White Race." The author stated that the negro had a great influence over the white race, and that as a whole it was for the bad, and argued that the state should have a farm and should rigidly enforce the vagrant law compelling all negroes without work to go to the farm. The statements of the chiefs of police of the south that there were three negro criminals to one white criminal were given by the author, who also urged the establishment of a reformatory for the children of both white and colored races as a preventive of crime.

PROF. JOEL DU BOSE, Birmingham, read a paper on "Dynamic Sociology," and the symposium closed with a paper on "Crime and Its Causes," by Dr. Hugh L. Appleton, Center, Ala.

The annual banquet was attended by about 200 physicians, Dr. John C. La Grande, Birmingham, presiding as toastmaster.

Election of Officers.

The following officers were elected for the ensuing year: President, Dr. Michael Hoke, Atlanta, Ga.; vice-presidents, Drs. Cola H. Peete, Macon, Ga.; William L. Nolen, Chattanooga, Tenn., and Lewis C. Morris, Birmingham, Ala.; secretary (re-elected), Dr. F. Trester Smith, Chattanooga, Tenn., and treasurer, Dr. George R. West, Chattanooga, Tenn.

Tuberculosis Congress.

The following resolution was presented and adopted by the society: "*Resolved*, That this society endorse the object and aims of the American Congress on Tuberculosis to meet in St. Louis, in July, 1904." Drs. Seale Harris, Union Springs, Ala.; Robert H. Tatom, Chattanooga, Tenn., and Cola H. Peete, Macon, Ga., were appointed delegates to represent the society at the congress.

Revision of Constitution.

A committee of three, consisting of Drs. Willis F. Westmoreland, Atlanta, Ga.; William G. Harrison, Talladega, Ala., and Frank Trester Smith, Chattanooga, Tenn., were appointed to revise the constitution.

For Good Roads.

In order to show the interest the medical men are taking in the matter of good roads the following resolutions were passed:

Resolved, That the members of the Tri-State Medical Association of Alabama, Georgia and Tennessee are very much interested in the building of better roads in the states represented by this association.

2. That we urge this community to lend every support possible to the good roads convention of north Alabama, which is to meet October 2 in this city.

3. That this medical association will lend any aid possible to the convention referred to.

4. That a copy of these resolutions be sent to the secretary of the goods roads convention in north Alabama.

The convention decided to meet next year in Atlanta, Ga.

SOUTHERN TRI-STATE MEDICAL ASSOCIATION.

*Third Annual Convention, held in Dallas, Texas,
October 7 and 8, 1902.*

The President, Dr. John S. Turner, Terrell, Texas, in the Chair.

Education of Feeble-Minded Children.

DR. CHARLES T. WILBUR, Kalamazoo, Mich., by invitation, read a paper on this subject, in which he said that he considered the proper education of feeble-minded children one of the most important subjects before the medical world to-day. Each state should take care of its children of feeble mind and should have a place especially adapted for their education. The most suitable place for an institution of this kind would be in the country, where the children can obtain the advantage of fresh air and exercise. They should be taught to beautify the grounds, cultivate the farms, and should also be taught the higher branches of education as these serve to influence the mind toward nobler things. From an institution of this kind the state could turn out citizens of the best kind, and instead of being a care to the public all their lives, they would be able to take care of themselves.

Medical Legislation.

In a discussion of the paper by Dr. James Orr, Terrell, Texas, on "The Medical Profession and Medical Legislation," Dr. Samuel E. Milliken, Dallas, urged the importance of the association adopting a constitution in accord with that of the American Medical Association, and Dr. Frank Paschal, San Antonio, Texas, expressed himself as heartily in favor of a state board of health, but said that he did not believe in allowing legislators to make laws relating to the medical profession when the legislators did not understand the first principles of the medical profession.

President's Address.

The retiring president, Dr. John S. Turner, Terrell, Texas, in his annual address, spoke of men who had greatly benefited humanity by research in the field of medicine and of the great advance that had been made in that field in the past few years.

Election of Officers.

The following officers were elected for the ensuing year: President, Dr. James C. Loggins, Ennis, Texas; vice-presidents, Drs. R. J. Grabill, South McAlester, Ind. Ter.; Joseph B. Relater, Oklahoma City, Okla., and Frank Paschal, San Antonio, Texas; secretary and treasurer, Dr. Charles M. Rosser, Dallas, Texas.

CONFERENCE OF STATE AND PROVINCIAL BOARDS OF HEALTH OF NORTH AMERICA.

*Seventeenth Annual Meeting, held at New Haven, Conn.,
Oct. 28 and 29, 1902.*

Under the Presidency of Dr. H. M. Bracken, Minneapolis.

(Continued from page 1203.)

Summer Resorts.

DR. C. A. LINDSLEY, New Haven, Conn., read a paper, treating this subject under the following heads: The tented camp; the million dollar hotel; the variety of guests who are entertained at them; their temporary occupation; the brevity of the visits of the great majority of those who frequent them, and their sense of responsibility while being there; the enormous increase of population when the summer influx is compared with the permanent residents of the remainder of the year; the colonies of cottages clustered in close proximity and the risk of unsafe results to health from all these peculiar conditions.

Quarantine Against Yellow Fever in Cuba.

This paper was read by MAJOR W. C. GORGAS, U. S. A. He described the quarantine methods in use during 1901.

Early in 1901, the army board put forward the theory which they had demonstrated, and which Dr. Finlay had, for the past twenty years, maintained, that the mosquito was the means by which yellow fever was conveyed from patient to patient, and the only means, and that it was not conveyed by fomites and articles soiled by the yellow fever patient. As the result of the acceptance of this theory by the sanitary department, changes were made in the quarantine regulations. If the disease could only be transmitted from a sick person by a mosquito, there would be no occasion to give any care to the bedding, fabrics, etc., soiled by the sick person, or that from the infected locality. In accordance with this view, the quarantine regulations of the city were modified. When a case was reported as yellow fever, the quarantined area was at once screened at public expense, with the idea of keeping infected mosquitoes in, and of keeping out all mosquitoes that had not been affected. When the case terminated, all the mosquitoes were killed by fumigation with pyrethrum powder, but no attention was given to clothing, fabrics, etc. Sulphur, tobacco and other substances are very much more deadly to the mosquito, but it was feared that if the people were caused too much inconvenience, it would result in cases being concealed, and this would defeat the success of the work.

The author believes that under the system of inspection, as enforced in Havana during 1901, yellow fever would no more frequently get into the United States than it has during the past year of rigid quarantine. The relief to commerce under such a system would be enormous. With present knowledge and experience he advocated as a quarantine against yellow fever, both land and maritime, that infected vessels, or vessels coming from an infected port, be carefully fumigated, so as to kill all mosquitoes in every part of the vessel. This would apply to ships on water and all cars, etc., on land. That the passage of merchandise, baggage, etc., be interfered with in no way whatever. That passengers, when sick, be quarantined and isolated; that all other passengers be allowed to pass freely; that non-immunes from infected points be seen once a day by a medical inspector, and if at the end of five or six days they are well, that they be released from all surveillance.

Method of Stamping Out Yellow Fever Suggested Since 1899.

DR. CHAS. J. FINLAY, Havana, Cuba, contributed a paper on this subject. His conclusions were:

1. That the germ of yellow fever is only pathogenous for human beings when introduced by inoculation.

2. That the regular process by which the inoculation of a germ is accomplished in nature is through the bites of the *Stegomyia fasciata*, the insect having previously become contaminated through the act of biting yellow fever patients within the first five or six days of their attack.

3. That, although the bites of a recently-contaminated mosquito can only produce a mild attack of yellow fever or simply confer latent immunity without eliciting any pathogenic reaction, the bites of the same insect, when its contamination dates back from several days or weeks, may be expected to produce severe or fatal attacks of yellow fever.

4. That the yellow fever mosquitoes, after they have once been contaminated, retain the power of inoculating the disease during the rest of their lives if they have chances of biting non-immunes.

5. That the essential conditions for stamping out yellow fever from an infected locality are: (a) to protect yellow fever patients from the bites of the special yellow fever mosquitoes; (b) to destroy all mosquitoes which may have reached yellow fever patients; (c) not to allow non-immunes to enter the infected zone until the last of the contaminated insects may be supposed to have died; (d) to lessen the chances of propagation by adopting adequate measures calculated to prevent the multiplication of mosquitoes in general.

6. In 1898, when the author reckoned the longevity of the stegomyia at thirty-five to forty days, as a maximum, he fancied that his theory would be improved by including also the possibility that the infected insects might transmit their infection to their progeny, as the cattle-tick is supposed to do with regard to Texas fever. The reasons which induced him to make that suggestion ceased to exist from the moment that the United States commission proved that some of the stegomyias live as many as seventy or more days, and the author was not sorry to give up an idea which did not fit readily his theory.

No Decision on Yellow Fever Propagation.

MAJOR W. C. GORGAS presented the following resolution as the report of the committee on yellow fever resolutions signed by Drs. Gorgas, Ross and Glennan:

Resolved, That in view of the establishment of the fact that yellow fever is only transmitted by the mosquito, this conference is of the opinion that there is no longer necessity for the disinfection in yellow fever cases of clothing, bedding, fabrics, or effects of any kind, but simply to take measures looking to the control of the sick and the extermination of infected mosquitoes. In cases where non-immunes have been exposed to infection, they should be observed during the period of incubation.

DR. J. S. STEPHENS, Natchitoches, La., representing Dr. Arthur Nolte, of the Louisiana State Board of Health, submitted a minority report, to the effect that the mosquito was not the only mode of transmission of yellow fever, he and his confrères believing that fomites carry the disease. The experience in the past had been extensive in that regard. Believing, therefore, that both the mosquito and fomites were modes of transmission of the disease, in Louisiana the same quarantine was maintained to-day that was carried out years ago, with slight modification.

After a spirited discussion, participated in by several members of the Conference, Dr. John S. Fulton, Baltimore, moved that both the majority and minority reports be spread on the proceedings, but that the conference not commit itself to any expression concerning the practical measures to be used in restricting yellow fever. This motion was adopted.

Address of Welcome.

An address of welcome was delivered by Prof. Wm. H. Brewer, president of the State Board of Health of Connecticut, after which came the delivery of the presidential address, by Dr. H. M. Bracken, Minneapolis.

The State in Its Relation to the Tuberculous.

DR. BRACKEN considered the subject under the following heads:

1. The care of the advanced or incurable cases.
2. The care of the incipient cases.
3. The protection of the uninfected.

Humanity demands that we should care for the incurable individuals. The last United States census gives the total number of deaths during the census year from this one disease as about 110,000. Undoubtedly, a large proportion of these patients were too poor to care for themselves during the latter part of their illness. Looked at from an economical standpoint, it is wise to provide special hospitals for such cases rather than to thrust them on the general hospitals where they may infect the non-tuberculous patients. Humanity demands that the tuberculous poor should be decently housed. Discretion, as well as humanity, demands that the incurable tuberculous shall be properly cared for.

The present method in vogue in certain state institutions of drawing a line between the advanced and the incipient cases of tuberculosis, and saying to the former, "Go hence; we can not cure you; we do not want you; you can not get well; go home and die, while we care for those only who may recover," is highly deplorable. It is depressing; it is inhuman. Undoubtedly a percentage of the advanced tuberculous cases may recover. Why should this class of patients be told, indirectly at least, that they are incurable? Why should not hope be held out to them as long as there is any hope whatever?

The incipient tuberculous demand attention. It is easier to persuade legislators to give money to institutions that can show great results. Every hospital is ambitious to keep its death rate as low as possible. Appeals for institutions for the incipient tuberculous are influenced by the fact that better results can be shown for this class than for the advanced cases, and the feeling prevails that it is through results we must appeal to legislators.

If it is a public responsibility to provide for all tuberculous individuals, it is an imperative duty to protect the non-tuberculous. This can only be done by removing all tuberculous individuals from the homes or places of residence where they are a source of danger.

DR. BRACKEN presented resolutions, which were adopted, declaring the conference in favor of notification and registration of the tuberculous, and that state and municipal authorities should care for such individuals and provide proper institutions for them.

California Plague Situation Condemned.

PROF. F. C. ROBINSON, Brunswick, Maine, presented the following resolutions in behalf of the State Board of Health of Maine, expressing the opinion of the conference as to the conduct of the health authorities of San Francisco in dealing with the plague question:

WHEREAS, Thirty cases of yellow fever have occurred since July 13, 1902, to their origin or exact location having been steps having been taken to restrict the City Board of Health of San Francisco being a sides of the State Board of Health of California having been fully established by the history, supported by documentary evidence in the possession of this conference; therefore, be it

Resolved, That the Conference of State and Provincial Boards of Health of North America views with abhorrence the irretrievable disgrace of the present State Board of Health of California, and pronounces the plague situation in California a matter of grave national concern; and be it further

Resolved, That the National Conference of State and Provincial Boards of Health of North America does hereby advise the various State Boards of Health of the United States to consider the propriety of calling on the Surgeon-General of the United States Public Health and Marine-Hospital Service to arrange at the earliest possible date a joint conference for the purpose of eradicating the plague from the United States.

The resolutions were unanimously adopted.

DR. CRESSY L. WILBUR of Lansing, Mich., read two papers, one entitled "Progress of the Movement for Uniform Statistics of Causes of Death," and the other, "How Shall Births Be Registered?"

Some Recent Evidence as to the Spread of Typhoid Fever.

DR. HENRY B. BAKER, Lansing, Mich., followed with a paper on this subject. In about 25 or 30 per cent. of the cases of typhoid fever, the urine contains vast numbers of the specific micro-organisms which cause the disease; also that this condition sometimes remains for a considerable time after apparent recovery, and that cystitis months after recovery from the fever may be due to the continued presence of typhoid bacilli in the bladder. This is one reason why typhoid fever is sometimes spread more or less directly from person to person, and

Practice of Medicine—Osteopathy—Use of Title.—Chapter 117 of the Laws of North Carolina of 1885 amended Section 3132 of the Code with regard to practicing without license by adding thereto: "And any person who shall begin the practice of medicine or surgery in this state for a fee or reward, after the passage of this act, without first having obtained license from said board of examiners, shall not only not be entitled to sue for or recover before any court any medical bill for services rendered in the practice of medicine or surgery, or any of the branches thereof, but shall also be guilty of a misdemeanor," etc. In the case of *State vs. McKnight* the question was the simple one, the Supreme Court of North Carolina says, whether one who practices "osteopathy" is indictable if he has not procured the license required for any one by the above section before beginning "the practice of medicine or surgery." A special verdict of the jury found that the defendant's "treatment of his patient did not consist in the administration of drugs or medicines, but in the manipulation, kneading, flexing and rubbing of the body of his patients and in the application of hot and cold baths, and in prescribing rules for diet and exercise; . . . that the defendant was engaged in the general practice of that science; that he also prescribed hypnotism and suggestion under hypnotism." It also found that "upon two occasions he used a small surgeon's knife in opening an abscess in the mouth of one Shedd, but charged no fee for his services." The Supreme Court says that all it can declare on the facts found in the special verdict is that the defendant's practice was not the practice of medicine or surgery, and no license from the medical board of examiners was required. It says that the only surgery was without fee or reward, an act of charity and that was incidental and not in the usual course of the practice of osteopathy. It can not be said that one practices "medicine and surgery" when he uses neither drugs, medicines or surgery. Section 3124 requires the "board of medical examiners" to examine all applicants, "to practice medicine or surgery in anatomy, physiology, surgery, pathology, medical hygiene, chemistry, pharmacy, materia medica, therapeutics, obstetrics and the practice of medicine." It can not be conceived that the legislature would require the above examination for a profession which eschews the use of drugs and surgery. As to the argument that the science, if it be a science, of osteopathy is an imposition, the court, legally speaking, knows nothing. It only knows that the practice of osteopathy "is not" the practice of medicine or surgery as is commonly understood, and therefore it is not necessary to have a license from the board of medical examiners before practicing it. If it is a fraud and imposition, and injury results, the osteopath is liable both socially and criminally. Doubtless there is an appeal to the imagination, but that is a necessary ingredient in all systems of healing. The aim of medical science, now probably the most progressive of all the professions, is simply to "assist nature." Osteopathy proposes to do that by other methods than by the use of medicines, or the surgeon's knife. Moreover, the court says that it attaches no weight to the argument that the defendant hung out his sign and advertised himself as "doctor." The special verdict found that he had a diploma from a college of osteopathy bestowing that title upon him. There are many kinds of doctors besides medicine—as doctors of law, doctors of divinity, doctors of physics and veterinary doctors and others still. Besides in this country, so far at least as titles go, "honors are easy." If the General Assembly shall deem osteopathy a legitimate calling it may see fit, possibly, to protect educated and skilled practitioners by requiring an examination and license by learned osteopaths of applicants for license, but certainly the examination would be on subjects appropriate to secure competency therein, and not on an entirely different course such as that prescribed for applicants to practice medicine and surgery. Dentistry is not the "practice of medicine or surgery," but it is a related profession, as is also pharmacy, and each has its prescribed course of examinations of applicants for license. Whether the same rights and dignity shall be bestowed on osteopathy is a matter for the general assembly, or if it is found to be a fraud, its exercise may be made indictable. It seems that it more nearly approximates nursing in many respects (though differing in others) when taught as a profession.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical News (N. Y.), November 1.

- 1 *Shortening of the Radius in Colles' Fracture. George R. Fowler.
- 2 *Report of Ninety Cases of Typhoid Fever in Infants and Children. Isaac A. Abt.
- 3 Parasitic Amebæ. Frederick G. Canney.
- 4 *Vertigo in Neurological Diagnosis. Pearce Bailey.
- 5 *Ocular Vertigo. Wilbur B. Marple.
- 6 To What Extent, if at All, Should Physicians Dispense? H. C. Masland.

American Medicine (Philadelphia), November 1.

- 7 *Ligation and Clamping the Ureter as Complications of Surgical Operations. John A. Sampson.
- 8 *Arthropathy of the Vertebral Column in Tabes. William G. Spiller.
- 9 *Subcutaneous Tendon-Splicing: A Modification of Anderson's Open Method, Adapted Especially to the Tendo-Achillis. J. T. Rugh.
- 10 A Preliminary Note on Pompholix as It Occurs in New Orleans. Isadore Dyer.
- 11 The Causes, Prevention and Cure of Puerperal Eclampsia. Robert Reyburn.
- 12 Sarcoma of the Nares and Ethmoid Cells. Joseph S. Gibb.
- 13 Surgical Work of Professor von Mosetig-Moorhof in the Vienna Allgemeine Krankenhaus. Nicholas Senn.

Boston Medical and Surgical Journal, October 30.

- 14 *The Teaching of Surgery. (Concluded.) Herbert L. Burrell.
- 15 *A Report of the Blood Examination in Ten Cases of Severe Burns of the Skin. Edwin A. Locke.
- 16 *Septicæmia and the Curette. H. Plympton.
- 17 A Case of Ununited Fracture of the Radius Due to Osteomyelitis. Charles F. Painter.

Medical Record (N. Y.), November 1.

- 18 *The Use of Concentrated Actinic Sunlight in the Treatment of Tuberculosis. J. W. Kime.
- 19 Some Experiments with Paraffin. A. E. Comstock.
- 20 *The Use of the Clinical Thermometer as an Aid in Quarantine Inspection. A. H. Doty.
- 21 *X-Rays in the Treatment of Cancer and Other Malignant Diseases. Emil H. Grubbé.
- 22 *Hydremia and Malaria. R. Cadwallader.

Philadelphia Medical Journal, November 1.

- 23 Report of a Case of Penetrating Wound of the Heart—Unsuccessful Attempt at Suturing. John H. Gibbon.
- 24 *A Contribution to the Study of Nephritis in Smallpox Based upon Analyses of Urine in 128 Cases. William H. Welch and Jay F. Schamberg.
- 25 The Autobiography of a Victim of Chronic Catarrhal Appendicitis. Frederick A. Rupp.
- 26 Report of a Case of Septicæmia, as I Felt It Myself. J. C. Newman.
- 27 Conclusions as Regards the Exsanguinated Uterine Zones. Byron Robinson.
- 28 Hospital Charities in Philadelphia. Daniel Baugh.

New York Medical Journal, November 1.

- 29 A Case of Necrosis of the Mucosa of the Large and Small Intestine, with Hemorrhage into the Tissues, Produced by Streptococci (Enterococci). H. F. Harris.
- 30 Rotary Curvature of the Spine; a Reply to Dr. Lovett. A. B. Judson.
- 31 *The Modern Basis of Dietetic Treatment in the Uric Acid Diathesis. Alfred C. Croftan.
- 32 *The Medical Treatment and Management of Acute and Chronic Cholelithiasis. Leonard Weber.
- 33 *The Effect of Climate on Laryngeal Tuberculosis, with Special Reference to High Altitudes. Robert Levy.
- 34 The Burke Foundation and a Plea for Proper Homes for the Convalescent Poor of Large Cities. S. A. Knopf.
- 35 The Dependence of Skin Affections upon Nutritive Disturbances. W. R. Inge Dalton.
- 36 On the Immediate Repair of Cervix Lacerations. Anna F. Donoghue.

Cincinnati Lancet-Clinic, November 1.

- 37 The Vaccination Problem. Benj. F. Lyle.
- 38 Surgery of Prostate, Pancreas and Diaphragm. (Continued.) B. Merrill Ricketts.
- 39 The Treatment of Puerperal Eclampsia. John Rivers.

Virginia Medical Semi-Monthly (Richmond), October 24.

- 40 Some Benefits of Thorough Organization of the Medical Profession, Both to the Laity and Profession; with Mention of Some of the Most Prevalent Causes of Sickness, Race Decay, and Their Prevention. (Concluded.) R. S. Martin.
- 41 Report of a Case of Secondary Hemorrhage Following Tonsillectomy; Measles. Clarence P. Jones.
- 42 A Case of Poisoning from Pennyroyal. G. W. Holland.
- 43 The Webster-Baldy Operation for Retrodisplacement of the Uterus. Charles R. Robins.
- 44 The Advantages of Bladder Drainage as Illustrated by Some Recent Cases. Lewis C. Bosher.
- 45 The Diagnosis of Chronic Interstitial Nephritis. Barnard E. Baker.

American Practitioner and News (Louisville), September 15.

- 46 X-Rays in Surgery. Arthur T. McCormack.
- 47 Therapeutics of X-Rays. James B. Kinnaird.
- 48 Serum Therapy in Laryngeal Diphtheria. Adolph O. Pfingst.
- 49 Stomach Diseases in Children. H. H. Roberts.
- 50 The Rational Treatment of Locomotor Ataxia. Curran Pope.

American Journal of Obstetrics (N. Y.), October.

- 51 Report of Two Cases of Gastrectomy. Albert Vander Veer.
- 52 *Normal Involution of the Appendix as a Matter of Surgical Interest. Robert T. Morris.
- 53 *Normal Saline Solutions Before, During and After Abdominal Operations. William H. Humiston.
- 54 *The Management of Cases of Emergency Arising from Rupture in Ectopic Pregnancy. Augustus P. Clarke.
- 55 So-called Neurasthenia and Hysteria in Their Relations to Abdominal Section. J. Stewart Nairne.
- 56 *An Operation for Stricture of the Rectum in Women. Thomas J. Watkins.
- 57 *Plastic Surgery of the Female Urethra. Henry P. Newman.
- 58 Some Recent Surgery for Biliary Obstruction. I. S. Stone.
- 59 Secondary Puerperal Hemorrhage. L. W. Atlee.
- 60 *The Time of the Occurrence of Ovulation as Deduced from Some Clinical Observations. Jennie G. Drennan.
- 61 Hydrorrhea Gravidarum. W. Sinclair Bowen.
- 62 The Degeneration of Gynecology. W. P. Carr.

Pennsylvania Medical Journal (Pittsburg), October.

- 63 *Address of the President—Antagonisms to Scientific Medicine. Francis P. Ball.
- 64 Address of Welcome, Pennsylvania State Medical Society. Edward Harvey.
- 65 Ability of the Eye to Withstand Injury and Disease. P. J. Kress.
- 66 *Severe Burn of the Eye and Face by Nitrite of Amyl, with Loss of the Eye. Edward A. Shumway.

International Medical Magazine (N. Y.), October.

- 67 Chronic Colitis, Membranous Colitis and Neuroses of the Colon. C. A. Ewald.
- 68 Powdered Cattle Fish in the Treatment of Intestinal Catarrhs. A New Apparatus for Irrigating the Colon. George Herschell.
- 69 *Chronic Enteritis in Relation to Disturbances of the Splanchnic Circulation. Fenton B. Turck.
- 70 Inflammations of the Appendix, with Reference to Their Dependence upon Conditions of the Colon and the Indications for Operation. A. L. Benedict.
- 71 The Electric Treatment of Chronic Diseases of the Intestines, Especially Catarrhal, with Atony and Constipation. Margaret A. Cleaves.
- 72 Chronic Enteritis and Enteroptosis, with Special Reference to Treatment. J. A. Lichty.
- 73 Carbonic Acid Gas in the Treatment of Dysentery and Membranous Enteritis. A. Rose.
- 74 Diarrhea in Its Relations to Chronic Catarrh of the Intestines, Including Catarrhal Appendicitis; Treatment. Boardman Reed.

Bulletin of the American Academy of Medicine (Easton, Pa.), October.

- 75 The Religion of Science. Victor C. Vaughan.
- 76 The Medical Profession and Social Reform. Edward T. Devine.

Louisville Monthly Journal of Medicine and Surgery, November.

- 77 Treatment of Prolapse of the Rectum. Joseph M. Mathews.
- 78 *Septicemia and the Curette. H. Plympton.
- 79 Treatment of Pulmonary Tuberculosis. Henry M. Pitman.
- 80 Medical Organization. Ben P. Earle.
- 81 Climatic Treatment of Consumption. S. G. Cain.

Canadian Journal of Medicine and Surgery (Toronto), November.

- 82 Virchow. J. J. MacKenzie.
- 83 Pleurisy with Effusion. D. Gilbert Gordon.
- 84 Pleurisy as Associated with Tuberculosis. John Hunter.
- 85 Report of a Case of Claw-Hand Resulting from Compound Fracture of Forearm; Cured by Operation. H. P. H. Galoway.
- 86 The Methods of Using Argyrol. A. C. Barnes.
- 87 Medical Review of Reviews (N. Y.), October 25.
- 88 *Otitis Media in Infancy and Childhood. W. M. Carhart.
- 89 Remarks on Gas-Ether Anesthesia. James T. Gwathmey.

Journal of Medicine and Science (Portland, Me.), October.

- 89 The Requirements of a Surgeon. W. P. Giddings.
- Fort Wayne Medical Journal-Magazine, October.
- 90 Some Cases of Appendicitis and the Lessons They Teach. Miles F. Porter.
- 91 *The Roentgen Rays in the Treatment of Inoperable Cancer. N. L. Deming.

Albany Medical Annals, November.

- 92 Introductory Address, Albany Medical College. Joseph D. Craig.
- 93 The Influence of the Discovery of the Relation of Bacteria to Disease on the Practice of Medicine Exclusive of Surgery. (Concluded.) H. Judson Lipps.

Southern California Practitioner (Los Angeles), October.

- 94 Some Ideals of the Medical Teacher. James H. McBride.
- 95 Some Obstetrical Experiences. Anstruther Davidson.
- 96 *A Study of Diagnosis of Incipient Pulmonary Tuberculosis. F. M. Pottinger.

Kansas City Medical Record, October.

- 97 Examination of Sputum in Pulmonary Tuberculosis, with a Record of Twenty-five Cases. H. Z. Gill.
- 98 Perineorrhaphy. H. C. Crowell.
- 99 Some Recent Remedies and Applications in Throat and Nose Practice. Hal Foster.

Western Medical Review (Lincoln, Neb.), October 15.

- 100 Leucorrhea. W. O. Henry.
- 101 Our Duty to the Public in Acute Infectious Diseases. A. D. Nesbit.

- 102 *Apocynum Cannabinum in Some Dropsical Conditions. M. L. Hildreth.
- 103 The Middle Turbinate. Henry B. Lemere.
- 104 Tendon Surgery. A. I. McKinnon.
- 105 The Question of the Disposal of House Drainage. W. S. Pratt.
- 106 House Disinfection After Smallpox. Ira W. Porter.
- 107 Acemegaly, with Case and Autopsy. W. F. Milroy.
- 108 Rubbish in Medical Literature. J. Lue Sutherland.

Medical Times and Register (Philadelphia), October.

- 109 Formalin in Skin Diseases. Heinrich Loeb.
- 110 *How to Assist Young Girls to Womanhood. Edward C. Hill.

Hot Springs Medical Journal, October.

- 111 The Effects of Prolonged Lactation upon the Eye. H. Moulton.
- Alabama Medical Journal (Birmingham), October.
- 112 To What Extent Should Physicians Supervise the Education of Our Boys and Girls, with Special Reference to College Women. (Concluded.) D. L. Wilkinson.
- 113 *Diagnostic and Therapeutic Measures Overlooked by the General Practitioner in Diseases of the Stomach. W. P. Harbin.
- 114 The Duty of the Profession and the Need of State Sociological Societies in the Development and Education of the Race. R. R. Kime.
- 115 The Methods of Using Argyrol. A. C. Barnes.
- 116 The Medical Profession and Its Duties to the Public. W. E. Davis.

Southern Practitioner (Nashville, Tenn.), November.

- 117 Placenta Previa. George C. Trawick.
- 118 *How to Assist Young Girls to Womanhood. Edward C. Hill.
- 119 *Septicemia and the Curette. H. Plympton.

Atlanta Journal-Record of Medicine, October.

- 120 Education as a Sociologic Factor. George H. Price.
- 121 *The Criminal Himself. S. G. C. Pinckney.
- 122 The State's Duty to the Orphan. Edgar J. Sprattling.
- 123 *Some Practical Problems in Sociology Shown by a Study of the Southern Negro. M. L. Perry.

New Orleans Medical and Surgical Journal, November.

- 124 The Reciprocity of Medical Examining Boards. E. L. McGehee.
- 125 Postpartum Hemorrhages. R. A. Gray.
- 126 Care of Children's Teeth. A. G. Friedrichs.
- 127 The Surgery of the Child. John F. Oechsner.
- 128 Suspension of the Uterus on the Round Ligaments. C. Jeff Miller.
- 129 Chronic Traumatic Ulcer of Leg, of 25 Years' Standing; Skin Grafting (Thiersch); Medullary Narcosis. Burdett A. Terrett.

Georgia Journal of Medicine and Surgery (Savannah), June.

- 130 On the Treatment of Disease by the Actinic Ray. William S. Gotthell.
- 131 *Some Medical Aspects of Senile Prostatic Hypertrophy. W. H. Prioleau.
- 132 *Is Tuberculosis a Disease of Environment Only? H. McHaton.
- 133 Polyhydramnios, Its Differential Diagnosis and Treatment, with the Report of Cases. Edward P. Davis.
- 134 The Treatment of Placenta Previa. Joseph E. Allen.
- 135 Contributions to Practical Therapeutics. Albert C. Barnes and Hermann Hille.

Columbus Medical Journal, October.

- 136 Lectures on Peritonitis. Starling Loving.
- 137 Colles' Fracture. Will J. Means.

1. Colles' Fracture.—Fowler describes the various forms and conditions of Colles' fracture, which has no classical type, but varies from a slight separation of a spicula of bone to extensive fracture with large displacement or impacted fracture. He remarks that it is not correct to say that there is no deformity with impacted fracture. There is a relative downward displacement and a more or less pronounced radial flexion (abduction of the hand or forearm). Pain is often a prominent symptom. He remarks that in treatment, if sufficient force can be brought to bear to overcome the deformity at once, and if pains be taken to maintain the normal position of the ulnar nerve by a sufficiently hard and properly applied pad placed on the palmar side of the head of the ulnar, and if, in addition, early massage and movements of the fingers, both active and passive, be employed, the very best results can be obtained in the great majority of cases. He uses a tightly rolled portion of an ordinary muslin roller bandage about the diameter and length of the little finger, prevented from slipping by covering with pieces of adhesive plaster folded in such a way that before applied it presents an adhesive surface to the skin as well as to the roll. An anesthetic should always be employed and the normal length of the radius restored if possible. The ulna is then forced into place and the roll placed on the palmar surface to retain the reduction, and held there by several turns of adhesive plaster, the breadth of which corresponds to the length of the roll. The edges of the adhesive plaster are nicked to prevent these from sinking into the skin should swelling occur subsequently. The arm is placed in a sling with the

hand dependent, so as to maintain the latter in a position of ulnar abduction. In spite of every effort, however, it will be found impossible to effect a complete reduction in certain cases, but they are rare. Where the deformity resulting from failure to reduce the displaced ulna is of sufficient importance, either from impairment of function or the presence of pain or otherwise, he has practiced the removal of the head of the ulna through an incision made along its border. The operation is performed subperiosteally, the section of bone being made by the Gigli wire saw. Where the alignment of the radius is but slightly disturbed, the displacement of the lower fragment being entirely in the upward direction, and at the expense of its cancellous tissue into which the upper fragment is crushed, this operation will be found to fulfill all the indications of improvement of function, relief of pain and correction of deformity. Where the impaction is slight and shortening, due to an angular deformity or a bowing of the radius, it will not be so useful. Here nothing short of refracture with perhaps cuneiform osteotomy will completely serve the purpose. There are two symptoms, however, which excision of the head of the ulna will relieve. They are interference with palmar flexion of the wrist and the presence of pain.

2. See abstract in *THE JOURNAL* of October 18, p. 1000.

4. **Vertigo.**—The neurologic interest of vertigo is associated with disease of the brain and neuroses. Bailey mentions drug vertigo, and particularly in this connection that due to iodid of potash. He thinks it also occurs in the specific iodid treatment of suspected syphilis. In neurasthenia vertigo is principally subjective. The patients can walk a chalk line unfalteringly, and there is no increase in the normal swaying when they stand with the feet close together and the eyes closed. It is a symptom of fatigue and is intensified by idea. Some neurasthenics have real objective vertigo, and this should invite closer investigation as to whether due to degenerative changes of the blood vessels of the brain. In hysteria, vertigo is less frequently complained of, but there are a number of symptoms that might be mistaken for objective vertigo. In neither hysteria or neurasthenia is it possible to establish the nature of the vertigo by one symptom. In neurasthenia the diagnosis is by exclusion. Other causes must be eliminated before it can be set down as purely neurasthenic and functional. In organic diseases of the brain vertigo is due to interference with the centers of equilibrium in the medulla and cerebellum, and the author gives the connection of these with the ganglion of Scarpa in the internal ear and its connection with the semi-circular canals, explaining thus the phenomena. The medulla, pons, cerebellum and possibly the cerebrum are the nervous structures in which foci exist that may give rise to subjective and objective vertigo. In the pons and medulla such invasion is usually tumor, while in the cerebellum abscess is more frequent. Injuries may also cause loss of equilibrium in the cerebellum, but they are rare. When they occur in the medulla and pons they are usually rapidly fatal. It is in the cerebellum that vertigo as a focal symptom of nervous disease is of great importance. Cerebellar vertigo is essentially static and locomotor; in the prone position the patient is usually free from it and it is not made worse by closure of the eyes. Theoretically the staggering is toward the side of the lesion, but practically this is not always the case. The great difficulty in the diagnosis is due to pressure symptoms at a distance. He points out the difficulties in the localization of the lesion in the cerebellum, though the existence of cerebellar disease is not so difficult of diagnosis. Unless unilateral nerve deafness is present it is impossible to be certain as to which side is affected. It is also suggested as a possibility that the main centers of equilibrium may have their representations in the cortex. Two chronic brain diseases are especially notable for vertiginous symptoms: they are epilepsy and general paresis. Vertigo is a very frequent symptom, especially in the petit mal attacks. Cerebral endarteritis is one of the most fertile causes of vertigo due to brain disease, and is especially prominent in the aged. It is often the chief clinical symptom of general arteriosclerosis.

5. **Ocular Vertigo.**—Marple discusses the causes and symptoms of ocular vertigo, remarking that it is most frequently

due to paralysis or paresis of some nerve supplying the ocular muscles and causing diplopia. The less conspicuous the ocular anomaly the more apt is the patient to suffer from vertigo. Failure of the vertigo to disappear when one eye is closed does not necessarily exclude the possibility of some muscular anomaly of the eye. If closing one eye, the right for example, does not cause the disappearance of the vertigo, then have the patient close the other eye, that is, the left alone. If we have to do with paralysis or paresis of the ocular muscles the vertigo will disappear at once. As to what muscle is affected it is often very difficult to decide, but this is only of interest to the ophthalmologist. The causes of ocular paresis are chiefly syphilis, diphtheria and diseases of the brain and cord, and the treatment should be that of the underlying cause. If we have excluded any paralytic muscular anomaly, the chances of finding any ocular cause for the vertigo are much lessened. If there is any ocular paralysis he thinks it improbable that the eyes are the cause of the vertigo. There should be a rigid examination made for refraction, under a mydriatic, if possible, and for the correction of any error that may exist. He remarks in conclusion that while he has met with a few cases of vertigo associated with ocular palsy, the number in which a muscular or refractive anomaly of the eye was the cause, has been very small.

7. **Ligation and Clamping the Ureter.**—The experience at the Johns Hopkins Hospital, including 16 cases, is reported and analyzed by Sampson. He concludes that occlusion of the ureter by a ligature or clamp is of quite frequent occurrence during gynecologic operations. Only a portion of these injuries are recognized either during operation or afterwards. A ligature about a ureter, if removed before the close of the operation, will probably do no injury. The clamp is more liable to give rise to post-operative results, but neither, if removed before the close of an operation, do as much harm as an operation that interferes with the blood supply of the ureter sufficiently to give rise to a urinary fistula, due to sloughing of the ureter at that place. Complete and permanent occlusion of the ureter in the absence of infection leads to renal atrophy, with more or less dilatation of the ureter and pelvis, usually without symptoms or evidence of constitutional disturbance, and probably without much shock. Ligation of the ureter is probably less likely to cause either a marked hydronephrosis or a pyonephrosis than a uretero-ureteral anastomosis. Ligation of the ureter may be considered a justifiable procedure when necessary in cases in which uretero-ureteral or ureterovesical anastomosis is impossible. Such operations, however, have been successful under great tension in which 2 to 9 cm. of the ureter had been removed. In ligation of the ureter care should be taken to doubly ligate it with non-absorbable material, and if possible to place the ligated end in a skin incision. Only a portion of the cases of ligation or clamping of the ureter can be recognized after operation as: 1. In cases in which both ureters have been occluded, anuria will probably be the only evidence of the trouble for the first twenty-four or forty-eight hours. 2. In cases where urinary fistula develops from injury. 3. Cases where definite symptoms arise, such as pain along the ureter and in the kidney region, possibly associated with chills and fever and other constitutional disturbances. These are exceptions rather than the rule and probably indicate a stenosis rather than an occlusion. 4. A mass may develop in the renal region due to formation of a hydronephrotic kidney, and this mass may form without symptoms. 5. The injury may be discovered at autopsy. Ligation of the ureter may terminate fatally when renal insufficiency exists or in cases of profound shock. A person in such a condition with only one working kidney has less chance than one with two. The ligature may slip, be absorbed, or in some way lead to leakage of urine, which, if the abdomen be closed and there be no avenue of escape, may cause death, especially if infection be present. Catheterization of the ureter preliminary to hysterectomy for carcinoma of the cervix is valuable in abdominal and combined abdominal and vaginal hysterectomies, but the catheter should be removed before closing the abdominal

cavity. The ureter can be palpated at any time, and therefore there is less danger of injuring it and the operation is expedited. Post-operative uretero-vaginal fistula from interference of the blood supply of the ureter is less likely to follow when the ureter is catheterized, for the exposure of that portion of the ureter above the broad ligament is unnecessary, as it can readily be palpated. If the ureter is adherent to the growth, the dissecting free of it would probably mean a return of the carcinoma, and also possibly a ureteral fistula due to interference with its blood supply. Hence it is better to make a wider dissection, excising the lower end of the ureter with the growth and implant the free end into the bladder, thus giving less chance for the return of the disease and also for ureteral fistula. The catheter itself protects the ureter in various ways, rendering its displacement a little more difficult. It is less likely to be kinked by ligation in the surrounding tissue. It also has other advantages; it prevents ligation doing harm by occlusion, and offers resistance to a knife or scissors, preventing the ureter being cut across, and helps in finding injuries to the ureter and also serves as a guide with which to repair the injury. Clamping the catheterized ureter may crush the catheter so that a portion of it will be left in the ureter in withdrawing the catheter; but this can readily be removed through a small slit and the slit repaired, hence the importance of withdrawing before closing the abdominal incision. If the catheterized ureter be clamped in a vaginal hysterectomy for carcinoma of the cervix, a portion may be broken off and left, which would probably necessitate an abdominal or retroperitoneal operation for its removal. While a catheterized ureter is easy to palpate in the vagina and hence its exact location may at any time be determined, the operator must always bear the foregoing in mind and determine its position before clamping. The author asks, is not vaginal hysterectomy for carcinoma of the cervix contraindicated when, according to Wertheim, in 90 cases of abdominal hysterectomy for carcinoma of the cervix, metastases of the carcinoma to the pelvic lymph glands were found in 30 of the cases, and there was no relation between the local extent of the disease and the presence or number of lymph glands involved?

8. Vertebral Arthropathy in Tabes.—Spiller reports a case of marked spinal deformity in tabes, a condition which had been noticed by Charcot and Marie and by Koenig, who considered the deformity due to fracture. He thinks possibly other cases may be found in the literature, but he reports it on account of its rarity.

9. Subcutaneous Tendon Splicing.—Rugh discusses the advantages and disadvantages of the open and the subcutaneous methods of operation on the tendons and offers a modified operation based on that of Anderson, who split a tendon longitudinally and slid one portion over the other and sutured in the position of correction. After having done this several times Rugh devised the following improvement, by which it can be done through a very small skin incision and without lifting the tendon from its bed. He uses a very small knife with a long shank and a blade about one and one-half inches in length, turned at right angle to the shank and having the cutting edge anteriorly so that, as the knife is pushed forward, the tendon is slit. After a thorough preparation of the skin the operation is done as follows: "The tendon is put on the stretch, and an incision one-half to three-quarters of an inch in length is made directly over it at about its middle point. After the tendon has been exposed, the blade of the knife mentioned is passed through its center, and being held on the same plane as the tendon, is pushed to the one extremity of the tendon, or for a distance of two or three inches, the tendon being outlined by the thumb and finger held on either side of it. The knife is then withdrawn in the same line, turned and pushed in the opposite direction for the same distance, thus splitting the tendon for four to six inches. The points at the upper and lower ends of the tendon to which the knife reached are marked on the skin with a sharp-pointed tenotome, and after withdrawal of the splitting knife the tenotome is introduced on the right side of the tendon at one end, and the right half of the tendon is severed by carefully cutting little by little

from above downward until the dividing slit is reached. When this half is severed it is seen to relax immediately, the tendon being held tense the while. Then the left half is cut in the same way at the opposite end and side, and as corrective pressure is made, the two halves slide past one another in the wound. When completely corrected, the two ends are sewed together through the small skin incision and the incision closed by one or two sutures. A plaster-of-paris or other fixed dressing is applied to maintain the correction secured, and this or another one worn for about four weeks, by which time firm union will have occurred." It will be readily seen, Rugh says, the most important objections to the Anderson method are overcome by this one, viz., the long skin incision, the danger of sepsis and that of sloughing from interference with the blood-supply. Like everything else, however, it has its disadvantages, but these have been found to be easily overcome. The first one is, the operation can not be easily performed in those cases in which the tendon has a partial twist, as the fibers do not run straight, and the splitting knife may run out at one side or the other. This condition, however, may be recognized so soon as the tendon is exposed, and if present the incision can then be extended and an Anderson operation done, without, however, lifting the tendon or separating it from its bed. If this is omitted, the circulation will be less disturbed, and consequently there will be less danger of sloughing. The second disadvantage is, there may be some uncertainty as to when the half of the tendon is severed, as a few fibers still remaining above or below may prevent relaxation of that half; but if the handle of a bistoury or other flat instrument be introduced into the slit, every fiber on the one side of this may be cut without danger to the integrity of the other half. He has done this operation in twelve cases with only satisfactory results, with no sepsis, a very small skin scar, definite lengthening, etc.

14.—See abstract in *THE JOURNAL* of July 12, p. 101.

15. Blood Condition in Burns.—After a rather full historical résumé, Locke gives an account of ten cases of severe burns observed in the Massachusetts General Hospital. His conclusions are: "1. The blood flows sluggishly, and is of a peculiar dark, purple appearance. 2. An immediate increase in the number of erythrocytes, in severe but not fatal cases, of from 1,000,000 to 2,000,000 per c. mm., takes place within a few hours; in fatal cases, of from 2,000,000 to 4,000,000 per c. mm. 3. A rapidly increasing leucocytosis constantly occurs: in cases ending in recovery often of 30,000 or 40,000 per c. mm.; in fatal cases usually above 50,000 per c. mm. 4. Morphological changes in the erythrocytes are slight. 5. The percentage of neutrophils is somewhat above the normal, but not so much as in the ordinary inflammatory leucocytosis. 6. A considerable destruction of the leucocytes takes place, especially in the very severe burns. 7. Myelocytes may be present in small numbers in severe cases. 8. There is, as a rule, marked increase in the number of blood plates."

16.—This article has appeared elsewhere. See *THE JOURNAL* of October 25, §36, p. 1072.

18. Tuberculosis.—Kime describes his method of treating tuberculosis by means of large reflectors throwing blue light, rich in actinic rays, over the chest, and reports 29 cases. He thinks the treatment with direct reflected light is much better than that from other sources. The human body is translucent to actinic light, and the irritant action of the light on the living body cells is a direct stimulus to them. A high percentage is absorbed by the tissues and produces definite chemical changes and also inhibits and destroys bacterial life.

19. Paraffin Prothesis.—From experiments with paraffin injections in rabbits Comstock concludes that it forms a sort of bridge-work in the tissues, and is not an encapsulated foreign body. He illustrates his paper with microscopic sections showing the results or differences produced after these injections and confirming his view.

20. Temperature.—Doty has examined a large number of emigrants at the New York Quarantine Inspection and finds that the average temperature is about as usually estimated, 98.5, but lower temperatures are very frequent, down to as low

as 96 or 97, especially early in the morning. A temperature above 99.5 he would consider pathologic. A higher temperature than normal may be due to nervousness, and often occurs this way in healthy individuals.

21. **X-Rays in Cancer.**—Grubbé reports cases and concludes that in properly selected cases the *x*-ray capable of producing remarkable results. The relief of pain is one of the most prominent features of the treatment. Restrictive changes are noticed in all primary cancer of tuberculous growth and the rays have a decided effect on internal cancer. The greatest result is obtained in treating post-operative cases to prevent recurrences. The proportion of clinical cures by this method is greater than that obtained by any other treatment. He maintains that there is an idiosyncrasy to the *x*-rays and the peculiarities of each case must be studied. Dermatitis within certain limits is sometimes a desirable feature in the treatment. The ordinary tubes with changing vacuums are not desirable for radiotherapeutic work, and only those which allow of perfect control of the vacuum should be used. The *x*-ray has a selective influence on the abnormal cells. It lessens hemorrhages and discharges and makes the patient more comfortable and prolongs life even in hopeless cases.

22. **Malaria.**—From his study of malaria in a California town Cadwallader has developed the theory that perhaps the increased proportion of water in the circulation may play a very important part in the causation of malaria, rendering the system more susceptible to infection.

24. **Nephritis in Smallpox.**—The following are the conclusions of Welch and Schamberg from a study of over 1000 examinations in 128 cases of smallpox with special reference to the kidney conditions: "1. Albuminuria is more common in smallpox than is generally believed, having been present in 65 per cent. of the cases examined. The fact that tube casts were found in 45 per cent. of the cases warrants the assertion that the albuminuria in most cases is the expression of a structural change in the kidneys. 2. Cases of discrete variola and well-marked varioloid have, in our experience, been accompanied with nephritis almost as often as cases with more profuse eruptions. This would suggest that the kidney involvement is the result of the influence of the smallpox poison. 3. The daily fluctuation in the presence of the abnormal urinary constituents necessitates repeated examinations in order to avoid misleading results. Microscopical examinations of the sediment will frequently reveal the presence of tube casts when albumin is not present in quantities demonstrable by the ordinary tests. 4. The clinical symptoms of variolous nephritis are, as a rule, mild and by no means as obvious as those observed in scarlatinal nephritis. 5. Arnaud's investigation demonstrates that albumin may persist in the urine in minute quantities after convalescence from smallpox. This occurred in 75 per cent. of his cases. The histological examination of the kidney would indicate that this minimal albuminuria represents interstitial changes in the kidney. 6. If it be true that the albuminuria accompanying infectious diseases is, in large part, the expression of a structural change in the kidneys, is it not probable that the damage thus done may, if unrecognized and uncared for, insidiously eventuate in chronic Bright's disease? 7. The practical lesson which is contained in this proposition is that the urine of patients convalescent from infectious diseases should be carefully and repeatedly examined and the diet and mode of life of the patient regulated accordingly.

31. **Uric Acid Diathesis.**—Croftan considers that of the primary cause of uric acid diathesis we know nothing, but he places himself on the neuro-humoral standpoint as defined by Duckworth. The neurosal element, while apparent, is intangible, essentially hereditary and probably not remediable in one generation. The perversions of the uric acid chemism are more definite and are amenable to considerable modification and to correction by dietetic treatment. The characteristics of uric acid diathesis are as follows: 1. The uric acid of the blood is increased. 2. Crystalline deposits of sodium urate are found in certain necrotic tissues. The increase of uric acid in the blood can be due to increased formation of uric acid,

which is usually in an analytic way from disassimilation of more complex compounds. The latest view is that uric acid is specific, a metabolic product of a special kind of albumin, namely, nucleins. These are the chief constituents of all cell nuclei and hence are contained in many articles of food and also in our tissues. The food nucleins we can control; the tissue nucleins we can not. The decreased destruction of uric acid is, the author thinks, a more prolific cause of uric acid accumulation than over-production. The retention of uric acid can not be definitely ascertained. The deposit of crystalline sodium urate in necrotic tissues must necessarily be due to local factors, probably poor vascularization of the parts may be made responsible to a large extent. The reduced alkalinity of the blood that has been credited is not demonstrated. A more important factor is change in the relative proportion of salts in solution in the serum. The significance of necrosis found in the vicinity of urate concretions is still obscure. As regards the dietetic treatment the two chief indications are: 1, to prevent the increase of uric acid in the blood; 2, to promote the solubility of uric acid either in the blood or in the concretions that have already formed. To reduce the production is one of the most feasible methods and the restriction of articles of food containing many cell nuclei must necessarily decrease the formation. The moderate use of uric acid forming food is rational treatment. We know too little of the normal mechanism of uric acid destruction to enable us satisfactorily to regulate this process, but certain dietetic rules can directly and indirectly aid in the elimination of uric acid by exercising an effect on the circulation and the renal excretion, indirectly, by sparing the heart and kidneys and enabling them to perform their function in a normal manner. Whether or not alkalies introduced into the system are capable of influencing the alkalinity of the blood and thus enhancing the solubility of urates is more than uncertain. But this is a popular belief and we may recognize that certain articles of food can increase alkalinity and others reduce it. Many foods contain alkaline salts, others acid salts of organic acids that are converted into carbonates in the body, and both impart an alkaline reaction to the urine. Sulphur and phosphorus in albumins are oxidized to sulphuric and phosphoric acids, and in this way reduce the alkalinity of the blood. We have also certain uric acid solvents, among them uric acid. Whether these will act in the blood stream as well as in the test tube remains to be determined. The following special rules are laid down: As regards the use of meat he thinks there is little difference between the so-called white and dark meats. Meats containing many cell nuclei, such as liver, kidneys, sweetbreads, brain, etc., and meat extracts, broths, gravies, etc., should be excluded. He holds that a certain amount of meat is necessary, while too much is bad. The digestibility of certain kinds must be considered. Eggs in moderation may be permitted, but he restricts the use of the yolk; the white has no effect on the uric acid increase. An exclusive milk diet is also bad in old people, but as an addition to a mixed diet is good if it can be borne. We must individualize. Its theoretical disadvantages are overcompensated by its highly nutritious character and its power to stimulate diuresis. On empiric grounds he excludes cheese from the dietary, though there is no compelling scientific reason for doing so. As regards fats there is no valid objection to their use in moderation. Carbohydrates have no appreciable effect on the uric acid increase, but their bulk and tendency to fermentation should be considered. They should be restricted, therefore, and in cases complicated with diabetes or obesity should be forbidden altogether or replaced by fats. In dyspepsia they should also be restricted, and in those inclined to overeat. These remarks apply to certain bulbous vegetables which contain a large amount of carbohydrate, but green vegetables, salads, etc., with the exception of young germinating plants like asparagus, may be given freely. Celery and onions are to be forbidden on account of the irritating oils they contain; tomatoes on account of the acids they incorporate. All spices and condiments should be avoided, as they irritate the digestive tract and overstimulate the appetite. All fruits, either deciduous or citrous, may be permitted. The crude

acids have no distinct effect on the increase of uric acid with the exception of tannic acid, which seems to increase it. Water should be the chief beverage, but not taken in excess; the flooding of the circulation with water is detrimental. The uric acid patient should drink one or two liters of water a day, no more or less, and it is better to take it in small quantities than in large quantities at long intervals. The uric acid solvent virtues of many mineral waters are problematical to the author. Tea, coffee and cocoa are generally forbidden and are to a certain degree restricted by him. Tea is preferable to coffee. Alcohol is generally to be forbidden on empirical grounds, except in some rare instances where the patients are accustomed to it. Champagne, sweet wines, cider, liquors and malted liquors are to be absolutely avoided. As in other dietetic treatment we should consider the previous habits of the patient, his temperament and character.

32. Cholelithiasis.—Weber treats the acute attacks of cholelithiasis with small hypodermics of morphin not less than one-quarter of a grain, a hot linseed poultice locally, a large enema to relieve and empty the rectum, and later, when nausea and vomiting have ceased, calomel or compound cathartic pills for thorough cleansing of the intestines. As regards olive oil by the mouth he has not been able to satisfy himself, but he has been in the habit of following up an acute attack of gall-stone colic by an enema of 4 to 6 ounces of warm olive oil high up in the bowel, to be retained over night and followed by copious flushing next morning with water, not soapsuds. The above described palliative treatment will not disappoint us so long as there is no manifestation of firm incarceration of one or more big calculi in the ducts of the viscus, and no empyema of the gall bladder. The paroxysm being over and when one is satisfied that there are only small concretions in the bladder, some of which have passed, he puts the patient on a proper diet, excluding all food rich in lime and magnesia salts, particularly peas, beans and certain cereals. The patient must eat sparingly, be very moderate in the use of alcohol, keep his bowels very regular and drink twice daily a half pint of hot Carlsbad water before eating. In cases of large gallstones crowding the ducts, the surgeon should be called in. Massage of the gall bladder has been recommended, but reflection shows that it is injurious. In chronic cases he found cases of solitary or large calculi in the gall bladder without enlargement of it, without icterus, but with chronic ailment which is altogether difficult to treat. Medical treatment, as a rule, does little good, and the surgeon must generally be called in. In a case of hydrops which caused but little pain, showed slight transient icterus, and was complicated with right floating kidney, he has seen good result from prolonged Carlsbad cure and the adjustment of the floating kidney. All chronic gall-stone disease, which never has severe attacks, or at least moderate relapses, requires careful supervision and treatment. He advises the use of alkaline waters and diet as above described at least twice a year and for four weeks at a time, in addition to this, hydrotherapeutic procedures like Turkish baths, etc.

33. Laryngeal Tuberculosis.—Levy has studied and discusses some 205 cases observed in Colorado, and finds that in cases in which both lung and throat lesions developed in Colorado, the latter showed itself at least forty-eight weeks later than in those originating elsewhere. In cases where the lung lesion developed elsewhere and the throat lesion in Colorado the throat lesion manifested itself on an average of 62.3 weeks later than those originating elsewhere. That is to say that as far as the development of laryngeal tuberculosis is concerned the effect of high altitude is to retard it by more than one year.

52. Normal Involution of the Appendix.—The fact first noticed by Senn and Ribbert, that the appendix normally undergoes an involution process marked by a disappearance of the mucous coat with obliteration of the lumen of the appendix, is discussed by Morris, who gives facts in his observation in regard to it. He notices the symptoms that seem to attend this involution and concludes that the solid replacement tissue is practically scar tissue, and that this scar tissue of the

appendix contracts and irritates nerve filaments that are involved in its extent. These produce sympathetic irritation of the intestinal plexuses, interference with their function and the various symptoms complained of. He says the symptoms accompanying normal involution of the appendix belong particularly to middle life, though they sometimes become marked as early as the twentieth year. The appendix usually feels harder than normal on palpation. The abdominal muscles are unnaturally resistant, protecting the irritated appendix very much as they do the infected one. He has seen the same symptoms to a large extent in tuberculosis of the organs. The treatment is symptomatic unless the disturbance is sufficient to call for removal.

53. Normal Saline Solution in the Abdomen.—Humiston gives an account of his method of using the peritoneal cavity as the inlet for large quantities of saline solution during abdominal operations. After partially closing the wound he pours into the cavity through a glass funnel not less than two quarts of normal saline solution at a temperature of 112 F. and quickly ties the few remaining sutures previously introduced. Within a few minutes the anesthetizer notes a change in the pulse, its rate diminishing, lowering tension and increasing fullness. The color of the face more nearly approaches the normal and usually the patients have little or no thirst for the first eighteen hours, have less pain, and require no enemata of any kind, and are thus kept free from the annoyance of too much nursing. In vaginal celiotomies where this method can not be employed he begins to have the saline administered subcutaneously, the trocar entering at the junction of the anterior axillary border at a line on a level with the upper border of the right breast, being plunged downward, backward and inward, so that the fluid finds the loose tissue in the axilla and backward underneath the scapula rather than under the breast. In this position, with a very little massage, three or four quarts can be injected with four feet of pressure. In emergency work outside of hospitals with limited assistants and absence of sterile salt solution he has used unsterile salt solution by allowing the sigmoid and colon to be slowly filled with the liquid. This is easily accomplished in the Trendelenburg position and the peritoneal cavity opened to permit of the ready guidance of the tube above the pelvic brim. Large quantities can be used in this way without hindrance in the field of operation. The rapidity of the absorption can only be appreciated by actual observation. Another use of the saline solution is shown in the fact that for a number of years he has not flushed a cavity nor used the drain. He has found that the filling of the peritoneal cavity after the tampon has been placed tends toward the dissolution of clots and the carrying off of effete material within the pelvis through the capillarity of the tampon. He has never had a bad result from this method. There are no certain indications for its use, but on the other hand he is certain that many a case of sepsis, septic nephritis and low cardiac vitality has been saved. Several cases are reported.

54. Ectopic Pregnancy.—From his own experience and that of his confrères Clarke is satisfied that no hard and fast rule should be established for the management of all cases of shock or collapse from rupture occurring in ectopic gestation. Shock is no guide to the amount of hemorrhage, even if it is large it may not long continue. In such cases much can be successfully effected by way of stimulation, opiates and employment of salt solution. Constitution and condition of the patient should be considered and perfect quietude should be enjoined. Operation is not always easy and the results are sometimes far from being satisfactory. The object of immediate treatment of whatever character is to lessen suffering and save life if possible. If operation can be dispensed with until more favorable conditions are present, it is the better course to pursue.

56. Rectal Stricture in Women.—Watkins describes a new operation, which consists in taking a portion of the vagina to make up a deficiency in the rectum by separating the recto-vaginal septum along the median line and making it one canal, as would result from complete perineal laceration, following this by suture of the vagina to the rectal mucosa on either side

with fine catgut; then performing a section of the vagina on both sides, making a blunt dissection of the two flaps on either side, with suture of the vaginal flaps thus transporting a part of the lumen of the vagina to the rectum. He says it is not difficult after turning a large amount of the vaginal mucous membrane into the rectum to restore the sphincter ani, as the lower end of the two flaps mentioned are in close proximity to the ends of the sphincter muscle.

57.—See *THE JOURNAL* of August 9, p. 304.

60. **Ovulation.**—The conclusion reached by Drennan is that ovulation occurs in the middle of the intermenstrual period.

63.—See abstract in *THE JOURNAL* of October 4, p. 857.

66.—See abstract in *THE JOURNAL* of October 25, ¶4, p. 1017.

69. **Chronic Enteritis.**—Turck's paper calls particular attention to the disorders of the splanchnic circulation as a cause of this condition; not only the obstructive, or passive form, but congestion without obstruction may become a potent etiologic factor in enteritis, such as congestion due to chilling of the surface, exposure after sweating. He has experimented with various irritants on the intestine with special observation as to the effect in regard to splanchnic congestion, and he finds that the effect of such a congestion is to cause an enormous loss of the normal resistance to infection. He reports a number of cases illustrating his views, showing the association of disturbance of the abdominal circulation with chronic enteritis, and that an important indication in the treatment of this condition is the correction of these disturbances. He reviews the treatment, the use of intestinal cleansing injections, gastric lavage and gastric gymnastics with the rubber stomach bag, and describes a practical method which he considers to be useful in some forms of enteritis such as mucocolitis and in its later stage, membranous colitis, which consists of adding 3 to 5 per cent. of ground slippery elm bark to water, adding any antiseptic or medicaments that may be desired in using it for injections or lavage. It forms a thin mucilage which overcomes all the irritating effects of the water and allows of a higher degree of heat of injection. With these he also uses pneumatic gymnastics, which he has described elsewhere, to affect favorably the circulation.

78.—This article has appeared elsewhere. See *THE JOURNAL* of October 25, ¶36, p. 1072.

87. **Otitis Media.**—Carhart calls attention to the importance of infection by way of the middle ear and the large proportion of children that have suffered this. According to Ponfick's statistics in 100 consecutive autopsies otitis media existed in all but 9, though not suspected in the majority. He thinks the examination of the ear should be a routine practice. The principal thing in treatment is to prevent the retention of infective products in the ear.

91. **X-Rays in Cancer.**—Deming reports a number of cases selected on account of their being advanced types, which were treated by the x-ray. He thinks this agent has the power of relieving pain in the majority of cases. An action in all cancerous tissues is obtained which unquestionably in many instances has, at least, prolonged the lives of hopeless cases, and so far as known produced in many others most flattering results. We have yet to learn how lasting the effect is. While in strictly operative cases we can not for any reason substitute new methods concerning which comparatively little is known, in operable cases where recurrences have followed operations, it is to be without question recommended, as well as employed after operation as a preventive before secondary lesions have occurred. All of his cases were treated with the tube close to the skin for the first few treatments, the length of exposure varying from five to ten minutes, and Mueller's tube was generally used in connection with the coil. Where only a small area required treatment a glass funnel was employed. Following the raying the cases were sprayed with static breeze which acted as a counter-irritant. He finds that frequent exposures with high intensity acted the best at the commencement of treatment, particularly in severe cases, later using some prolonged but less frequent treatment, with penetration somewhat reduced.

96. **Tuberculosis.**—The early symptoms of tuberculosis, such as increase of pulse, slight cough, dyspeptic disorders, nervous irritability, quick fatigue, etc., are reviewed by Pottinger, who calls attention finally to the tuberculin test which he advocates as a valuable diagnostic method, without the dangers that are charged to it. The x-ray and sputum examinations are also mentioned.

102. **Apocynum Cannabinum.**—Hildreth finds this drug very useful in edema accompanying varicose conditions, especially the varicose ulcers of elderly persons, and in this his experience agrees with that of others. He has also found it useful in general anasarca from other causes. How it acts is a question, yet the clinical fact is more valuable than the theory. In a general way it seems to act like digitalis, but has no cumulative tendency and no unpleasant after-effects if given in moderate doses. The preparation he has used most is Lloyd's tincture in doses of 2 to 3 minims in water every three or four hours. If given for some time a tolerance may be established requiring the administration of larger doses. He has never used it in the dropsy accompanying nephritis; it could hardly be expected to act as well as in the more passive conditions. It is said to be of value, however, in chronic Bright's disease, lessening the albumin and casts as well as the anasarca.

110.—This article has appeared elsewhere. See *THE JOURNAL* of October 25, title 53, p. 1069.

113. **Gastric Disorders.**—Harbin calls attention to the disorders of digestion due to enteroptosis and hyperacidity and the methods of their diagnosis and treatment. He says, in conclusion: "1. Every general practitioner can make a diagnosis of gastroptosis by the splashing sounds. By palpation he can recognize a nephroptosis and greatly relieve both conditions by an abdominal belt. 2. One-half of all digestive disturbances are attended with hyperacidity. 3. We can not diagnose hyperacidity with certainty, except by a test breakfast. 4. Lavage in mornings before breakfast with calcined magnesia relieves the pain and discomfort of hyperacidity. 5. The intragastric application of the faradic current gives strength to the involuntary muscles of the digestive tract and the voluntary muscles of the abdominal wall. 6. The physician and gynecologist too often consider gastric symptoms as a reflex disturbance of diseased female generative organs."

118.—This article has appeared elsewhere. See *THE JOURNAL* of October 25, title 53, p. 1069.

119.—*Ibid.*, ¶36, p. 1072.

121. **The Criminal.**—Pinckney's article is a discussion of the degenerate in relation to criminality. He calls attention to the fact that this country and Australia were settled under very different conditions, and that both developed alike, notwithstanding the number of degenerates and criminals transported to Australia inside of 100 years and the law-abiding high-class population that originally settled this country. This fact is in striking contrast to the increase of insanity in all civilized countries. Criminality seems rather to run itself out, while degeneracy still more tends to the disease consequence of insanity. He says it is evident that the innate restraining forces in the criminal are coming to the top.

123. **The Southern Negro.**—Perry reviews the facts in regard to the tendencies of the southern negro under modern conditions, the spread of venereal diseases, which is greater on account of their lack of control, tuberculosis which formerly was almost unknown and is now becoming a scourge, and insanity, which has increased twenty-fold. He does not wish to appear pessimistic, but simply to state facts without prejudice to those honest negroes who are endeavoring to elevate their race. He hopes that with their wider knowledge of facts some good might come to the negro and to society at large.

131. **Prostatic Hypertrophy.**—Prioleau concludes that in the majority of cases this condition is in the scope of the general practitioner's work, and that the majority of even aggravated, infected cases can be relieved and made comfortable without capital surgical intervention, but with judicious, cautious, aseptic catheterization, bladder washings, selected

diet, proper clothing and abstinence from alcohol and carbonated beverages.

132. Tuberculosis.—McIlhaton gives facts to show that tuberculosis is largely dependent on external conditions, referring in support of this view to the conditions among the negroes who in slavery times were almost free from the disease. The coolie experience in Cuba is also adduced as well as a Spanish colony in Central America, which immigrated there on account of its general tuberculous condition. It consisted at first of only ten families, living isolated with constant intermarriage, but has now become a remarkably superior and non-tuberculous community. On the other hand, non-tuberculous families by changing their modes of living have become uniformly tubercular, and he gives an instance. He asks, in conclusion, is tuberculosis a disease of environment only?

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures and single case reports are omitted unless of exceptional general interest.

British Medical Journal (London), October 25.

- 1 *A Discussion on the Treatment of Inoperable Cancer. Henry Morris and others.
- 2 *The Treatment of Inoperable Cancer of the Breast by the X-Rays. Thomas Bryant and others.
- 3 *A Discussion on Tuberculosis of the Testis, Prostate and Seminal Vesicles. Thomas Myles.
- 4 Two Cases of Chronic Pancreatitis Treated by Laparotomy. Edmund Owen.
- 5 *Experiences in the Extirpation of Tuberculous Lymph Glands During the Last Thirty Years. Rushton Parker.
- 6 *The Value of Imperfectly-Descended Testis. (To be continued.) W. M. Eccles.
- 7 Discussion on Radiography, X-Ray Treatment, the High-Frequency Method and Light Treatment. Dr. Freund and others.
- 8 A Note on the Histology of X-Rayed Lupus Vulgaris. George Pernet.
- 9 *The Pathologic Changes in the Skin Produced by the Rays from a Floues Lamp. J. M. H. MacLeod.
- 10 The T. R. Tuberculin Treatment of Lupus Vulgaris at University College Hospital. H. Radcliffe Crocker and George Pernet.
- 11 Blastomycetic Dermatitis in the Negro. T. Caspar Gilchrist.
- 12 A Discussion on the Treatment of Psoriasis. Malcolm Morris.
- 13 Seborrhea. Norman Walker.
- 14 Tumors of Xeroderma Pigmentosum. George Pernet.
- 15 The Heart and Nervous System. David Ferrier.
- 16 Serumtherapeutics and Carcinoma. Wm. James Hoyten.

The Lancet (London), October 25.

- 17 *The Heart and Nervous System. David Ferrier.
- 18 Tuberculosis of the Peritoneum from a Clinical Point of View. Edmund Owen.
- 19 *Some Morbid Conditions of the Mouth. Edmund W. Roughton.
- 20 Illustrative Cases of Gunshot Wounds of the Skull and Brain. L. G. Irvine.
- 21 *Mental Dissolution the Result of Alcohol. Robert Jones.
- 22 Case of Extrauterine Associated with Intrauterine Fertilization, in Which Abdominal Section was Performed. John Phillips.

Intercolonial Medical Journal of Australasia (Melbourne), September 20.

- 23 *The Causation and Probable Pathology of Fibrinous Bronchitis. J. R. Harris.
- 24 *The Abuse of Creosote and Guaiacol in the Treatment of Phthisis. Duncan Turner.
- 25 *Tuberculosis in a Mining Community. B. Stewart Cowen.

Australasian Medical Gazette (Sydney), September 20.

- 26 Complete Prostatectomy and the Bottini Operation. H. V. Critchley Hinder.
- 27 A Case of Placenta Previa with Contracted Os and Rigid Cervix. C. E. Todd and H. A. Sweetapple.
- 28 Placenta Previa. H. A. Sweetapple.
- 29 Three Cases of Meralgia Parasthetica. George E. Rennie.
- 30 Therapeutics of the Roentgen Rays. L. Herschel Harris.
- 31 A Case of Complete One-sided Gigantism with Enlargement of the Opposite Side of the Brain. C. Reissmann.
- 32 Records from General Practice—Cases of Abortion. J. A. Cameron.

Bulletin de l'Académie de Med. (Paris), October 14.

- 33 *L'asphyxie toxique et la mort apparente par l'oxyde de carbone. Traitement par les tractions rythmées de la langue. J. V. Laborde.
- 34 *Official Report of Delegates to International Conference for Unification of Herolic Remedies. E. Bourquelot.

Presse Medicale (Paris), October 8 to 15.

- 35 (No. 82.) *De l'ablation esthétique des tumeurs bénignes mammaires. H. Morestin.
- 36 (No. 83.) *Technique de l'incision prérectale appliquée à la chirurgie génitale chez l'homme (Prostatectomie et Spermatocystectomie). R. Proust.
- 37 Le tannin dans la tuberculose. A. F. Pilicque.

Deutsche Med. Wochenschrift (Leipsic), October 16.

- 38 *Inoculated Metastases of Carcinoma. Olshausen.—Impfmetastasen der C.
- 39 *Die Agglutination der Streptococcen. F. Meyer.

- 40 Ein Visir-Meter. U. Mayeda (Nagoya, Japan).
- 41 *Painful Feet. A. Schanz.—Schmerzende Füße.
- 42 Ueber den Einfluss (influence) des Lecithins auf den Eiweissansatz (albumin metabolism). C. Massarin.
- 43 Vaccination. P. Schenk.—Impfgebisse und Impftechnik.
- 44 Nephrotomy in Anuria of Black Water Fever. Werner.—Ist bei Schwarzwasserfieberanurie die Nephrotomie indiziert?
- 45 Mesotan. T. Floret.
- 46 *Die Salz-Soda-Lösung (solution) in der Chirurgie. Tavel, Küttner and Balsch.

Muenchener Med. Wochenschrift, October 14.

- 47 Lungenödem und fibrinöse Bronchitis nach (after) Thoracentese. F. Magenau.
- 48 Zur Extension. F. Kuhn.
- 49 Substitution of Paralyzed Quadriceps. Magnus.—Der operative Ersatz des gelähmten Quadriceps femoris.
- 50 Simulation in Hysterics and Damage Cases. O. Niedner.—Zum Nachweis der S. bei Hysterischen und Unfallskranken.
- 51 *Zur Therapie und Pathogenese der Stenokardie (angina pectoris) und verwandten Zustände (allied conditions). R. Breuer. (Commenced in No. 39.)
- 52 *Zur Anatomie und Pathologie der Gallen- (biliary) Organe und des Pankreas. Von Büngner.
- 53 Detailed Report of Naturforschers Congress, Carlsbad, September 21-27. (Commenced in No. 39.)

Riforma Medica (Rome), ii, 10 to 58.

- 54 (No. 11.) Rectal Feeding in 3 Cases of Typhoid. A. Claps.—Dell' alimentazione artificiale per via del retto in tifo.
- 55 (No. 14.) Morbus Basedowii nei 3 bambini (in 3 children). V. Orvaza.
- 56 (Nos. 16-17.) Azione della chinina sui parassiti della malaria. A. Capogrossi.
- 57 (No. 18.) Azione delle gelatine-culture proteolitiche del bacillo del carbonchio (anthrax) nei conigli (in rabbits). A. Bajardi.
- 58 (Nos. 20-21.) Alterazione delle capsule surrenali e pellagra. R. Finotti.
- 59 (Nos. 22-23.) Tetanus Toxin Found in Nerves of Animals Succumbing to Tetanus, Not in Organs. E. Pasquini.—Sulla presenza del veleno tetanico negli organi, etc.
- 60 (Nos. 24-26.) Sulla cocainizzazione spinale. Schiassi.
- 61 (No. 27.) Trattamento degli aneurismi colla gelatina. C. Mancini.
- 62 (Nos. 28-31.) Sull' origine nevritica dell' angina pectoris da aortite sifilitica. U. Benenati.
- 63 (No. 32.) Su alcune indicazioni del siero fisiologico. L. Fornaca.
- 64 (No. 35.) 2 casi di diabete insipido trasformati in diabete mellito. L. D'Amato.
- 65 (Nos. 36-37.) Cytotoxic Serums. E. Ravenna.—Osservazioni intorno ai sieri citossici con spacciate riguardo al neuro siero.
- 66 (No. 38.) Antitoxic Power of Tissues. G. Angelici.—Il potere antitossico dell' organismo e dei tessuti in genere su alcuni veleni.
- 67 (No. 39.) Di alcuni modificazioni al metodo di Schenk (Iperemia artificiale) nella cura della tubercolosi polmonare. T. Silvestri.
- 68 (No. 42.) Technic for Radioscopy. L. Ferrannini.—La volumetria e i rapporti del corpo estranei, etc., esattamente determinati con la radioscopia.
- 69 (Nos. 43-44.) Diazo-Reaction. A. Nizzoli.—Valore diagnostico e pronostico della diazo-reazione.
- 70 (No. 45.) Sull' valor semiologico dell' epilessia parziale; 2 casi. G. Seppilli.
- 71 (Nos. 46-47.) Le fibre amieliniche pericellulari e peridendritiche nella corteccia (cortex) cerebrale. L. Roncoroni.
- 72 (No. 48.) Effect of Tuberculin, Mallein, Carbolic Acid, etc., on Frogs and Guinea-Pigs. G. Angelici.—Sulla tossicità della mallein, etc., nelle rane e cavie.
- 73 (No. 49.) *Metodo di cura radicale contro le varici e le ulcere varicose degli arti inferiori (leg ulcers). C. Mancini.
- 74 (No. 50.) Hemolytic Power of Aqueous Extract of Tumors. G. Panzacchi.—Sul potere emolitico dell'estratto acquoso dei tumori.
- 75 (Nos. 55-56.) *La meningo-mielite cronica e la sua cura. S. Personal.
- 76 (No. 57.) *Nuovo metodo di sutura per l'anastomosi del dotto deferente reciso (of severed vas deferens). A. Ferraro.
- 77 (No. 57.) Contributo all'intervento chirurgico nei vizi di conformazione dell' ano e del retto. P. Ferraresi.

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- 78 (No. 8.) *Sull' atrofia secondaria indiretta degli elementi nervosi. E. Tanzi.
- 79 *Su le policonie nella demenza paralitica. R. Lambranzi.
- 80 (No. 9.) Sulla presenza di nevrogia nella struttura dei plessi coroidali. G. Catola.
- 81 *Le alterazioni della cellula nervosa nell' avvelenamento acuto e cronico da iodoformio. R. Giani and E. Ligorio.
- 82 Contributo allo studio della illusione igrica (sensation of wetness of objects). E. Ravenna and T. Montagnini.
- 83 Il fascio di Pick. F. Ugoletti.

Revista de la Soc. Med. Argentina (Buenos Ayres), x.

- 84 (No. 55.) The Cocco-Bacillus of Broncho-Pneumonia and Its Serum Treatment. J. Lemos.—Sobre el coccobacilo de la bronco-pneumonia.
- 85 Traumatologia forense. Importancia medico-legal de las heridas (wounds) incisas en ciertas regiones de la cabeza (head). J. A. Carreras.
- 86 (No. 56.) *Adenopatías tráquea-bronquiales en la infancia. Su influencia en la pertussis febril. A. M. Centeno.
- 87 Las diversas especies de hemospóridios palúdicos en la República Argentina. J. C. Delmon.
- 88 Tratamiento de la hipertrofia de la próstata. J. N. Posadas.
- 89 *La remède typhique dans la fièvre typhoïde. J. Mendez.
- 90 Mal de Cadera. J. Lignières.
- 91 *Topography of the Medulla and Spinal Cord. L. Valle.—Topografía médulo-raquídea.

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- 92 (No. 8.) Croup at Köping. G. Ericsson.—Redogörelse för de kruppfall som vardats å Köpings epidemiskjukhus år 1899-1901.
- 93 Report in Detail of Fourth Northern Congress of Internal Medicine, Helsingfors, July 4. Main Addresses on "Syphilitic Affections of the Heart" and "Etiology of Nephritis."
- 94 (No. 9.) *Relations between Diphtheria and Angina Phlegmonosa. H. Ernberg.—Om förhållandet mellan difteri och angina phlegm.
- 95 *Om Katatonja. F. Svenson. (Commenced in No. 8.)
- 96 2 fall af erythema scarlatiniforme recidivans. A. Afzelius.
- 97 Umbilical Hernia. K. Kaijser.—Nagra ord om operationer af navelbräck.
- 98 Lithotomy or Lithotripsy for Elderly Men? J. Borellus.—Stensnitt eller stenkrusning vid blåsten hos äldre män?
- 99 (No. 10.) Om den medullära anestesien. A. Karlow.
- 100 Diabetes in Different Classes of Society and Its Significance from the Standpoint of Life Insurance. Curt Wallis.—Om sockersjukans förekomst i olika samhällsklasser, etc.
- 101 *Om Katatonja. H. Lundborg.

1. **Treatment of Inoperable Cancer.**—After an elaborate review of the various methods of treatment, including serum-therapy, phototherapy, radiotherapy, etc., Morris offers the following conclusions: "1. That the bacterial treatment of malignant disease is not of the slightest use in carcinoma; that not one-half of the cases of spindle-celled sarcoma disappear under treatment with Coley's fluid; that in cases of carcinoma, other than the spindle-celled, Coley's fluid is not of value; that the treatment by Coley's fluid has many dangers, and should never be employed except in absolutely inoperable cancer. 2. That Beatson's treatment is limited in its action to cases of mammary carcinoma . . . and even in these cases only a small proportion are influenced by the treatment, while neither as a cure nor as a palliative can it be relied on in any given case. 3. That rodent ulcer has in Finsen's light and in the x -rays its most successful treatment . . . and that this is true not only of cases otherwise inoperable, but also of operable cases, because of their excellent cosmetic results, and of their effect on insidious and non-evident foci. . . . 4. That sarcoma, epithelioma and the other forms of carcinoma are best treated, whenever possible, by early excision; and that all forms of treatment hitherto tried in inoperable cancers of these kinds are uncertain and inconstant in their effects, and unreliable as to the durability of the results they produce. In the vast majority of cases they are quite without palliative influence of any kind, except possibly in relieving pain. 5. That the boundary line between what are considered operable and inoperable cases needs revision from time to time; that the tendency to extend the limits of operable cases needs in some instances to be restricted, and in others there may prove room for further extension. 6. That it is open to question whether some of the operations performed for relief . . . should not be abandoned, and whether in other cases palliative operations ought not to be more often performed. 7. That investigations into both the cause and nature of the cancer are of the first importance, as being more likely to ultimately lead to cure than any treatment at present known. 8. That, with few exceptions, the attempts to cure cancer by means other than early and free operations have been hitherto almost invariably futile. Our complete ignorance as to the cause, nature, and curative treatment of cancer has long pointed to the necessity of instituting a comprehensive, collaborative and coöperating inquiry into the whole question of malignant disease; and it is a source of great satisfaction to know that at last, though after many vicissitudes, sufficient funds have been raised to enable the two Royal Colleges to make, at any rate, a beginning in this wide-reaching and unspeakably important subject."

2. **X-Rays in Cancer.**—The discussion on this subject is opened by Bryant, who reports cases and remarks that much good can be secured in inoperable cancer of the breast and skin; and there is reason to believe, in cancerous disease of the rectum, that relief of pain and the arrest of the progress, if not the disappearance, of local disease, can be obtained by the x -rays, but that at present surgeons are not justified in leading patients to expect a cure. It is essential that the treatment should be in the hands of medical experts and not allowed to pass into those of mere mechanics. In the discussion following several surgeons reported good results from the use of the x -ray and others reported their failures.

3. **Tuberculosis of the Testicle, Prostate and Seminal Vesicles.**—This subject is treated with conservatism by Myles, who concludes that where only one or two small nodules of chronic type appear in a man of good physique without any signs of general infection and without any enlargement of the prostate or vesicles, a partial operation would generally be sufficient and a more radical operation could follow it if necessary. In those cases where the prostate and vesicles are also involved he does not put much reliance on operative treatment and where suppuration already exists and the testicle is markedly enlarged and practically useless he advocates total extirpation without delay. Where both are involved he would almost shrink from advising complete castration, but it might be a graver responsibility not to advise it. Where general infection exists, of course there is no question that operation is inadvisable. Neither does he believe that a very hopeful outlook in operative treatment of tuberculosis of the bladder can be expected and as regards tuberculosis of the vesicles and limited to this organ, he can say nothing, as he has had no experience of this sort.

5. **Tuberculous Lymph Glands.**—Parker argues the following two points: 1. A more frequent and thorough submission to operation of the milder cases of tuberculosis of the glands; 2, a bolder and more frequent attack of advanced and extensive cases while they continue to occur. He warns everyone not to expect too much from scraping and scooping, but more thorough extirpation is required.

6. **Cryptorchidism.**—The value of an imperfectly descended testis is discussed by Eccles, who reviews the arguments for and against its removal. He thinks that where there is unilateral arrest of one accompanying hernia of the same side, a radical operation is indicated. The testis should be placed in the scrotum if it can be done easily and with the probability that it will not recede, but under other circumstances it should be preferably returned in the abdomen unless there are special reasons for thinking it is more advisable to remove it. If both are alike arrested it is injudicious to cut away either of them, for the amount of internal secretion that they together may produce may be sufficient to cause the proper development of the body in general, while that of one alone may be insufficient.

9. **Pathologic Changes in the Skin from the Finsen Light.**—MacLeod has studied the histologic changes produced by actinic rays in lupus vulgaris in two cases and gives here the details. He says in conclusion it may be asserted: "1. That the action of the actinic rays from an arc lamp on the granuloma of lupus is essentially destructive, and that this destructive process is indirectly produced and is simply the result of an ordinary inflammatory reaction. 2. That the effect of the rays on the surrounding healthy tissue is negligible, so that the doubtful tissue in the neighborhood of a patch of lupus may be safely exposed to them without subsequent injury and scarring. 3. That the destructive process, if the rays are judiciously employed, is not of such an intensity as to prevent subsequent repair, and a few days after it has reached its acme a process of construction sets in similar to that which takes place in the healing of inflammation. 4. That the process of construction is capable of replacing the destroyed granuloma with healthy fibrous tissue, forming a pliable scar, and the epidermis completely recovers from the edema caused by the action of the rays. Hence from the histologic standpoint the treatment of lupus and other granulomatous affections of the skin by the actinic rays is an ideal one."

17. See also title 15 above.

19. **Morbid Conditions of the Mouth.**—This third lecture by Roughton discusses the question of alveolar abscess. This even may be fatal, and he has met three such cases, one of pyemia starting from abscess, another of invasion of the cranial cavity and contents and the third of perforation of the common carotid artery without evidence of pyemia. The last case is notable on account of the absence of pain, the slight degree of fever, with almost entire absence of suppuration and the purely local nature of the process generally. A rapid

ulcerative process laying open the carotid artery was the cause of death. He thinks the peccant organism in the case was the *Streptococcus pyogenes*. Treatment should be energetic, the cause should be removed, but this does not always mean the sacrifice of the tooth, which he thinks is made a little too often. Chronic fistulous and blind abscesses are frequent, but the latter is seldom recognized until the tooth is removed. The treatment of the fistulous form consists in removing the septic material from the pulp chamber of the tooth, and if the tooth can not be rendered useful after this, it should be extracted. He closes the lecture with remarks on dental caries and teaching children the habit of cleansing the teeth. It can not be practiced too early, and in fevers and other diseases the teeth should be cleansed by the nurse. He asks the general surgeon whether he is in the habit of sterilizing the mouth before operating on the jaws or tongue. He does not find the importance of the subject duly insisted on in text-books. The cleansing should be begun many days before operation, if possible.

21. **Alcoholism.**—Jones' paper gives interesting statistics on the consumption of alcohol and its toxic action on the individual and the race. He finds that while the English people drink less per head than those of continental nations, yet the cost of alcoholic liquors in that country last year amounted to nearly \$20 per head, not including beer, of which 30 gallons per head were consumed. Moreover, a still more striking fact is that the death-rate from alcohol drinking during the last fifteen years has increased about 42 per cent. in men and 100 per cent. in women. In some of the larger towns it is greater than that from scarlet fever, and all other zymotic diseases taken together. The statistics of alcohol and insanity are reviewed, and he finds from the lunacy commission reports that the cases for which alcohol is assigned as the cause averaged 21.8 per cent. of the whole number for males and 9.5 per cent. in females in England, with a still higher proportion in Scotland. England is over-supplied with saloons. The special effects of alcohol are noticed, and he gives some interesting psychologic data as showing the effects on the mental condition, from investigations made in the laboratory of the Claybury Asylum under the direction of Dr. F. W. Mott. The pathology of chronic alcoholism is also described from data obtained from the same source. Jones believes in the control exercised on the sale of drink by restrictive legislation, and he says he does not think, but knows, that we can make not only our men and women, but villages and even larger communities sober by Act of Parliament if it is enforced. Therefore, he thinks the best working hypothesis for the prevention and cure of all forms of alcoholic disorders, whether mental or physical, must be based on the practice of total abstinence.

23. **Fibrinous Bronchitis.**—The condition discussed by Harris is considered by him to be due to congestive or low inflammatory edematous exudates from the serous lining of the respiratory processes and the cause of this in most cases is engorgement of the pulmonary circulation by temporary or permanent incompetence of the left ventricle, with competence of the right ventricle, but that the local congestion may, in some instances, be produced by strong vasomotor influences when disease already exists in the tubes; and that the former condition is responsible for the exudation occurring from the lungs instead of the strain being referred back to the general venous system. That fibrinous casts have been found in typhoid, variola, etc., is not an argument against the above conclusions, because we have in all these high temperature and the action of toxins, which tend to weaken the heart and produce edematous fluids in the lungs. In phthisis a local mechanical obstruction may produce local edematous exudates.

24. **Tuberculosis.**—Turner protests against the routine administration of guaiacol and creosote in this disease, which he thinks has become alarmingly common and reports cases. These drugs are apt to impair the digestion, and if we take care of the stomach the lungs will be better able to take care of themselves.

25. **Tuberculosis of Miners.**—The frequency of tuberculosis among miners is noted by Cowen, who finds that there

are six times as many deaths among them from consumption as from fatal mining accidents, and that the death-rate among miners over 45 is at the rate of 13 to 1 as compared with that of women of the same class. He thinks we should insist on the destruction of sputum in the mines and elsewhere and the proper ventilation of mines and bedrooms, as well as the other well-known prophylactic measures against this scourge.

33. **Traction of Tongue for Asphyxia from Gases.**—THE JOURNAL has frequently referred to Laborde's method of resuscitation of drowned persons by rhythmic traction of the tongue. He now announces that it is a life-saving measure also in cases of asphyxia from inhalation of carbon oxid, sewer gas, chloroform and illuminating gas. In one case a child had been resuscitated by this means after apparent death from drowning, with no signs of pulse or respiration forty-five minutes after he had been taken from the water. The teeth were pried open and rhythmic traction exerted on the tongue while the throat was tickled. In five minutes the child vomited and respiration was re-established at the same time. Ten days later the parents sent for the doctor again, as the child had suddenly died without any sign of sickness. He was in cadaveric pallor, the limbs relaxed, no sign of heart action or respiration. The air of the room was laden with the products of defective fuel combustion. After energetic traction of the tongue for ten minutes the child was restored. A second case was a woman who had tried to commit suicide by inhaling charcoal fumes. All measures to resuscitate her proved futile until five minutes of traction of the tongue restored the respiratory function. In a similar case the patient continued to breathe faintly on removal to the open air, but profound coma persisted, with complete loss of general and corneal sensibility, the entire body cyanosed, respiration jerky and pulse irregular and almost imperceptible. Inhalation of oxygen, artificial respiration, etc., failed to alter this condition, but traction of the tongue aroused the patient for an instant, after which she relapsed again into the coma. By the end of a half hour of this exercise with the tongue the corneal sensibility was faintly perceptible in one eye, and by the end of another half hour the pulse and respiration seemed a little less irregular and the other cornea exhibited a slight reaction, but the patient sank again into profound coma whenever the tractions were suspended. After two hours more oxygen was administered, on which the condition at once became alarming, with arrest of pulse and respiration, but again the patient was revived by the tractions. They were renewed again several times during the day and the coma gradually wore off by the end of three days. The engineer and fireman in a torpedo boat became asphyxiated and fell wedged behind the boiler in such a way that no means of resuscitation except traction of the tongue were possible, and this only for one of the men. It was promptly applied and he was restored so that he could extricate himself. The other could not be reached until this occurred, and it was then too late. In a case of intoxication from illuminating gas the patient was restored after forty-five minutes of traction of the tongue. In another case thirty minutes sufficed, but the tractions had to be repeated several times during the day as the respiratory function seemed again to flicker and be on the point of going out. [The recent death of the novelist Zola from carbon oxid, generated by a stove using "patent fuel" with the chimney accidentally obstructed, renders this subject peculiarly timely. He had fallen on the floor and had been dead for hours when found, while his wife still in bed, although respiration and pulse had vanished, showed a certain pinkness of the skin, and after twenty to twenty-five minutes of rhythmic tractions of the tongue, supplemented by Sylvester's method of artificial respiration, she was restored. (See editorial in last issue.) The *Gaz. Med. de Paris* states that an hour elapsed after the asphyxiated pair were discovered before a physician could be found to attend them. The lack of provisions for emergency relief at Paris is a theme to which it frequently recurs, constantly holding up as a model to the Paris authorities the police patrol wagons and stations in certain American cities.—Eo.]

34. See THE JOURNAL, November 1, p. 1123.

35. Esthetic Ablation of Innocent Tumors of the Breast.—Mórestin describes two cases in which he removed a tumor about the size of a walnut from a prominent location on the breast of society women, without leaving a trace of the intervention nearer than the axilla. He made a large incision in the axilla and opened up a passage down to the tumor under the skin. He was then able to work the part of the breast containing the tumor up into the incision and excise it with ease at this point. When the breast was released it slid back into its normal position and there is no trace of the operation except the hidden scar in the axilla.

36. Technic of the Prerectal Incision.—Proust illustrates with 11 large cuts the various steps of the technic by which it is possible to open up a wide avenue of entrance into the small pelvis through the perineum without injury of any organ. He calls special attention to the detachable zone which he has discovered back of the prostate. The urethro-rectal muscle is the key to this zone and must be severed before it can be entered.

38. Inoculated Metastases of Carcinoma.—Olshausen states that he performed a laparotomy on account of what he found to be an inoperable carcinoma of the ovaries, and closed the abdomen at once. The patient died two weeks later from embolism and the autopsy disclosed hundreds of metastases in the peritoneum which had not been there at the laparotomy, fourteen days before. In another case the patient had had both ovaries removed on account of papillary cystomata in the broad ligament. She was 29 years old and has never menstruated since. Twenty years later a large tumor developed in the abdominal wall projecting outward instead of inward, and bounded on one side by the linear scar left from the preceding laparotomy. It spread along one side of the scar, but did not invade the other side, demonstrating, he thinks, its character of a metastasis from inoculation. He has witnessed a number of cases of pseudomyxoma developing in the peritoneum after ablation of an ovarian cystoma with jelly-like contents. Marchand observed these pseudomyxomata on the upper surface of the diaphragm in one case, corresponding in every respect to the primary tumor. Baumgarten has also published a case in which metastasis of a benign tumor had occurred in the abdominal wall. After extirpation of a non-malignant ovarian cystoma a number of small metastatic tumors developed, both in and outside of the peritoneum, provided with the same epithelium noted in the primary tumor.

39. Agglutination of Streptococci.—Meyer has established that streptococci derived from various sources may be agglutinated by corresponding prepared serums. Also that there can be no question as to the diversity of various families of streptococci. His research has also convinced him that it is unwise to use bacteria for the production of a bactericidal serum for therapeutic use, which have been rendered more virulent by passages through animals. The specific agglutination is disturbed by this process, which he thinks is an argument against it.

41. Painful Feet.—Schanz describes the class of patients who complain of pains in the heel, sole, joints or toes, even of obstinate corns, but examination of the foot reveals nothing abnormal. Such cases are all attributable to flatfoot. The instep may appear normal, when in reality an unusually high instep has been transformed into a very low one and thus be really flatfoot, although it is still within the limits of the normal instep. There is no typical localization of the pains of flatfoot. Whenever he meets a well-dressed man who clings to old, worn-out shoes as the only ones he can wear with comfort, he is seldom wrong in the diagnosis of flatfoot. Treatment should be that for flatfoot, and he has found a celluloid rounding sole a convenient appliance. It can be molded to the foot when soft and the shape changed at will.

46. Tavel's Salt-Soda Solution.—See THE JOURNAL of November 8, p. 1219.

51. Pathogenesis and Successful Treatment of Angina Pectoris.—Breuer confirms the remarkable benefit to be derived from theobromin in these conditions as announced by Askanazy in 1895. The diuretic influence of this drug is

familiar, but its property of promptly arresting the pains of angina pectoris, cardiac asthma and allied conditions is less generally known, and yet Breuer considers it one of the most blessed facts in modern therapeutics. He describes over a dozen cases in detail, showing its rapidly beneficial influence in all pains of arterial origin. They form a series ranging from pure angina pectoris to attacks of pain attributed by the patients to the head, stomach, shoulder, kidney or intestines, and apparently with no features in common with angina pectoris, yet all show by the prompt response to theobromin that they have a common origin in the arteries and that theobromin has a specific action on the latter. Arteriosclerosis and certain other affections of the arteries are liable to cause constant pains in the vessels which may radiate to remote regions. The pains may be due to increased blood pressure and distention, but they are also liable to be caused by spasmodic contraction of the arteries. These contractions occur by preference in the smaller arteries and are the result of pathologic or pathologically exaggerated reflexes originating in the diseased vascular wall. They are set in motion by various causes which raise the blood pressure, emotions; muscular exertion, the horizontal position in sleeping, etc. They are especially liable to occur in the organs which require the largest supply of arterial blood, such as the digestive tract, heart and muscle. The arterial fluxion induced by increased function starts the attack of pain. The spasmodic contraction of the arteries causes symptoms of ischemia as the arterial supply is cut off from muscular organs. In the extremities it becomes evident as intermittent claudication; in the digestive tract as paresis or meteorism; in the heart, as sudden inadequacy and paralysis. Sensory phenomena may be superadded to these and it becomes difficult to decide whether the pains are due to the vascular spasm or to the ischemic parenchyma. When the vessels of the heart are directly or indirectly involved the specific angina cordis develops. The lesions of the heart arteries may radiate the pain to remote regions. The spasm of the heart arteries is peculiarly intense when it is not the result of the usual causes, but is due to direct irritation of the intima by a thrombus or embolus. This explains the sudden death that may occur from a small embolus in one of the terminal ramifications of a coronary as well as in case of obstruction of a large artery from this cause. Theobromin has evidently some action on the spasmodic contraction of the arteries, and when this is controlled the pain ceases. It may also act by diminishing the reflex excitability or by reducing the arterial pressure. Be this as it may, the fact is established that theobromin is a powerful and harmless remedy for pains on an arterial basis. Breuer always gave it in the form of diuretin (Knoll), in doses of .1 gm. four or five times a day, and in the severest cases 3 to 4 gm. a day. The only objection to its use, he remarks, is the high price charged for the preparations of theobromin.

52. Anatomy and Pathology of the Biliary Organs and Pancreas.—Büngner's communication was read at the Naturforscher Congress and presented some new views. He found in 58 cadavers that the common bile duct passed directly through the head of the pancreas in 95 per cent. and was so solidly imbedded for a distance of about 2 cm. that it could not be detached from the head without cutting. In 98 to 99 per cent. of all cases the bile duct and the pancreatic duct did not unite, but terminated at separate points in the duodenum. The mouths of the two ducts were separated by a space of .2 cm. on an average, and generally the pancreatic duct passed beneath the bile duct. The pancreatic duct had a small branch in 10 per cent., this branch debouching separately in the duodenum. These facts explain why the symptoms of obstruction of the biliary passages are liable to accompany any affection of the head of the pancreas. An isolated affection of the biliary system, on the contrary, is not accompanied by retention of pancreatic juice. The latter is unaffected by a lesion in the bile duct, while the flow of bile is not affected by a lesion in the pancreatic duct. But a lesion in the ampulla where both ducts debouch into the duodenum is liable to cause obstruction of both ducts and the symptoms of biliary retention are added to those of pancreatic retention.

73. **Circular Incision for Leg Ulcers.**—Mancini urges the importance of stretching the nerves during this operation, and also to make the incision higher on one side than the other, to add to its length. This method of treating varicose ulcers has proved remarkably successful in his extensive experience. [See THE JOURNAL of August 2, p. 289.]

75. **Treatment of Chronic Meningo-Myelitis.**—Personali has treated 16 cases of chronic meningo-myelitis by suspension and immobilization. Eight have been clinically cured, 4 extremely improved, 2 refused to continue the course and the results were negative in only 2. He excludes cases of syphilitic origin and also all very old, inveterate ones. He commences treatment with suspension for one minute a day, increasing by one minute to the fourth day, then applying four minutes' suspension a day for ten or twelve days. He then immobilizes the patient in a plaster corset in the dorsal decubitus. By the end of the third month the patient is allowed to sit up in bed, commencing very gradually, and finally to walk a few steps. He then suspends the patient as before and applies a second cast, but without such strict immobilization in bed. This cast is removed in two months and a strong corset applied and worn for two or three months, when the cure is complete. The effect of this treatment has been marvelous in his experience. The pains disappear in a day or so and the patient gains rapidly in weight. Constipation should be guarded against, and he supplements this mechanical treatment by daily injection of arsenic, for which he prefers a mixture of 2.5 gm. sodium cacodylate and 5 drops phenicated alcohol in 50 gm. distilled water.

76. **Anastomosis of Severed Vas Deferens.**—Ferraro has experimented on dogs for a method of uniting the stumps after the vas deferens has been intentionally or accidentally divided. He makes an incision across half the vas a few mm. from the end of the stump, and then incises from the middle of the first incision to the end of the stump, forming a T. The end of the vas released by these incisions spreads out into a square, almost flat, flap. The same procedure is repeated on the opposite side of the other stump, and the two square flaps thus produced are sutured together. The anastomosis is perfect and solid.

78. **Indirect Secondary Atrophy of the Nervous System.**—This elaborate research by Tanzi details experiments made on rabbits, dogs, etc., as to the effects of destruction of the sensory trunks traced back through the other neuron elements to the cortex. They find that the lesions in the nervous system of new-born animals do not cause the complete degeneration of the secondary neurons that is produced in the neuron directly wounded. The neurons having a simple connective relation with those wounded, but not directly injured themselves, may undergo processes of atrophy but not of total destruction. In consequence of the destruction of the primary optic neurons, the secondary tracts undergo a process of atrophy that does not alter the morphologic character of the elements. They become diminished in size, but preserve in a lesser degree their external configuration and their internal structure. In the nuclei where the primary tracts terminate, the atrophy is considerable in mass and is chiefly due to destruction of the nervous terminations of the neurons primarily injured; an interstitial atrophy to which the neurons of the second order contribute in so far as they become lacking in dendritic prolongations and therefore reduce the amount of gray tissue. Indirect atrophy of the neurons of the third and fourth order may be altogether lacking, as, for example, in the visual cortex of rabbits, after enucleation of the eyes. The atrophy continues of the same type, that is, reduction in the size of the cellular elements, but preserving the morphologic character. Tanzi finds that the lower the order of animals the less the atrophy. For instance, there is an absence of cortical atrophy in rabbits; it is only slight in cats, evident in dogs, and in man is also pathologically observed, hence it follows that the cortex is more sensible to the suppression of stimuli in the higher orders of animals. He also finds the same conditions in the organs and cells. The subcortical ganglia which have the most stable and automatic function show much less effect of

the absence of stimuli, while the cortex is most affected. His conclusion is that the most highly developed nervous centers are the most sensitive to suppression of stimuli, and that animals are most affected which have organs highest developed as compared with other animals.

79. **Paresis.**—Lambranzi has observed a case of paresis which commenced by polymyoclonic symptoms, subsequently developing into a well-marked case of paresis.

81. **The Effect of Iodoform on the Nerves.**—Giani and Ligorio have studied the effects of iodoform poisoning on the nerves. They find in the chronic type the lesions are less evident and a large number of the nervous elements escape, while in acute iodoform poisoning, on the other hand, the nervous lesions are always more grave throughout the whole cerebrospinal axis.

86. **Influence of Tracheo-Bronchial Adenopathy in Whooping Cough.**—The almost inevitable inflammation of the tracheo-bronchial glands in whooping cough is evidently a localization of the specific infection, aggravated possibly by secondary infection. It does not cause fever unless so extensive as to constitute an actual complication. When tuberculosis of the lungs follows whooping cough Centeno attributes it in the majority of instances to primary tuberculous infection of these glands.

89. **"Typhic Remedy" in Typhoid Fever.**—Mendez published four years ago the results of successful research on the vaccine of anthrax, and he has since been applying the same methods to the treatment of typhoid fever. He prepares the specific substance in the form of a powder instead of a serum, and reports 65 typhoid patients treated with it with one death. Benefit was apparent in every case. The temperature gradually subsided to normal and the diazo-reaction and albumin vanished from the urine. The general condition became remarkably improved by the third day after the injection and convalescence was established by the fifth to seventh day. He notes as an interesting fact that the roseolæ persist and may not appear until after the temperature and pulse are normal once more. One patient died from perforation of the intestines five days after entering the hospital; in this single case the diazo had persisted unmodified by the injection. No other treatment was instituted in any case except a few injections of caffeine. The author is professor agrégé of clinical medicine and has charge of the antitoxin laboratory.

91. **Topography of Medulla and Cord.**—Valle's article is illustrated with 9 engravings and 11 curves and establishes that the relations between the vertebrae, roots and spinal segments are not so diagrammatic as hitherto supposed. These relations vary somewhat at different portions of the spine, as he portrays in detail.

94. **Relations Between Diphtheria and Angina Phlegmonosa.**—Ernberg describes four cases of diphtheria which developed with the aspect of angina phlegmonosa. As the patients were adults the possibility of diphtheria was not borne so prominently in mind as if they had been children. In differentiating such cases the lack of severe general symptoms at first—in comparison with the intensity of the throat process—speaks in favor of diphtheria, also the pronounced swelling of the soft palate and the characteristic fetor ex ore. The local findings and symptoms seem to be identical in each disease, but in his experience these cases of diphtheria which simulated an angina phlegmonosa proved to be all exceptionally malignant in their course. Energetic antitoxin treatment is indicated, therefore, whenever there is the least suspicion in regard to the true nature of an angina phlegmonosa.

95 and 101. **Catatonia.**—Svenson reproduces the photographs of eleven cases of catatonia and reviews the differentiating points. He noticed in all of them a peculiar limitation of the field of mental conceptions and a remarkable tenacity in the dominant conception, except in the cases of stupor. Eight of the patients were women, only one married. Three were men, two were married. He refers to the relations between familial myoclonia and catatonia, and Lundborg completes the

data in this line, as he has had occasion to see two cases in which myoclonia was associated with catatonia. Faber of Copenhagen described last year two cases in sisters; one was a typical myoclonia and the other had commenced as catatonia at the age of 17, and after the patient had been some time in the hospital the symptoms of familial myoclonia developed. He has collected in the literature 37 cases of familial myoclonia, but in 10 the patients had not reached the age of puberty, when catatonia is most liable. Omitting these cases, 3 of the remaining 20 exhibited many points in common with catatonia. Some of the cases are imperfectly reported, and it is possible that the two affections were associated in more than the 3 mentioned.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

GENITO-URINARY AND VENEREAL DISEASES. A Manual for Students and Practitioners. By Louis B. Schmidt, M.Sc., M.D., Associate Professor of Genito-Urinary Diseases, Chicago Polyclinic. Series Edited by V. C. Pedersen, A.M., M.D., Recently Assistant Demonstrator of Anatomy, College of Physicians and Surgeons. Illustrated with 21 Engravings. Cloth. Pp. 249. Price, \$1.00. Philadelphia and New York: Lea Brothers & Co.

AN INTRODUCTION TO DERMATOLOGY. By Norman Walker, M.D., Fellow of the Royal College of Physicians of Edinburgh. With 43 Full-Page Plates and 47 Illustrations in the Text. Second Edition, Revised and Enlarged. Cloth. Pp. 301. Price, \$3.00. New York: Wm. Wood & Co. 1902.

TRANSACTIONS OF THE STATE MEDICAL ASSOCIATION OF TEXAS. Thirty-fourth Annual Session, Held at Dallas, Texas, May 6, 7, 8 and 9, 1902. Cloth. Pp. 587. Austin, Texas: Von Boeckmann, Schutze & Co. 1902.

TRANSACTIONS OF THE COLORADO STATE MEDICAL SOCIETY. Thirty-second Annual Convention. By-laws and List of Members. Cloth. Pp. 452. Denver: Published for the Society. 1902.

THE PUBLIC AND THE DOCTOR. By a Regular Physician. Cloth. Pp. 149. Price, \$0.50. Dallas, Texas: Published by Dr. B. E. Hadra.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., from October 25 to 31, inclusive:

Corbusier, Harold D., contract surgeon, U. S. A., is relieved from further duty in the Division of the Philippines, and upon the expiration of his present leave of absence will report in person to the commanding officer, Ft. Columbus, N. Y., for temporary duty, and by letter to the commanding general, Department of the East.

Davis, Wm. B., major and surgeon, U. S. A., is granted leave of absence for three months, to take effect on his being relieved from duty at Ft. Myer, Va.

Juenemann, Geo. F., contract surgeon, U. S. A., is granted leave of absence for one month.

Kemp, James F., contract surgeon, U. S. A., is granted leave of absence for one month.

McCallom, Francis M., asst.-surgeon, U. S. V., is honorably discharged from the service of the United States, to take effect Nov. 5, 1902, his services being no longer required.

Rhoads, Thomas L., first lieutenant and asst.-surgeon, U. S. A., the leave granted in Special Orders No. 203, Sept. 11, 1902, Department of California, is extended one month.

Southall, Edward A., capt. and asst.-surgeon, U. S. V., is honorably discharged from the service of the United States, to take effect Nov. 6, 1902, his services being no longer required. He will proceed to his home.

By direction of the Secretary of War the following-named assistant-surgeons, U. S. A., recently appointed, now at the places indicated after their respective names, will report in person at 9 o'clock a. m., Nov. 6, 1902, at the Army Medical Museum, in this city, to Col. Calvin DeWitt, assistant surgeon-general, U. S. A., president of the faculty of the Army Medical School, for the course of instruction prescribed in Paragraphs 542 and 543, Army Regulations, 1901:

First Lieut. Louis C. Duncan, Meriden, Kan.
First Lieut. Edward M. Talbott, Falls Church, Va.
First Lieut. John A. Clark, Washington, D. C.
First Lieut. Samuel J. Morris, Washington, D. C.
First Lieut. Noel I. Barron, Washington, D. C.
First Lieut. J. Morgan Coffin, Phoenixville, Pa.
First Lieut. John W. Hanner, Franklin, Tenn.
First Lieut. Levi M. Hathaway, Owensboro, Ky.
First Lieut. Alexander Murray, Alexandria, Va.
First Lieut. Phillip W. Huntington, Washington, D. C.
First Lieut. James Carroll, Washington, D. C.
First Lieut. James D. Fife, Charlottesville, Va.
First Lieut. William A. Powell, Cairo, Ga.
First Lieut. Leon T. de Wald, New York City.
First Lieut. Jesse R. Harris, Kenmore, N. Y.
First Lieut. George H. Scott, Butler, Pa.
First Lieut. Edwin D. Kilbourne, Chicago.
First Lieut. Robert L. Carswell, Chattanooga, Tenn.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy, week ending Nov. 1, 1902:

P. A. Surgeon W. B. Grove, detached from the *San Francisco* and ordered to the *Prairie*, for duty with the marine battalion aboard that vessel.

Asst.-Surgeon A. Stuart, ordered to duty at the naval hospital, Navy Yard, New York.

Asst.-Surgeon S. S. Rodman, detached from the *Alert*, and, when discharged from treatment at the naval hospital, Mare Island, Cal., ordered home and granted sick leave for two months.

Pharmacist F. T. Gordon, detached from the *Wabash* and ordered to the naval hospital, Boston, for treatment.

Surgeon H. E. Ames, ordered to the *Texas*.

P. A. Surgeon J. E. Page, detached from recruiting duty and ordered to the *Newark*.

Asst.-Surgeon A. W. Balch, detached from the *Monongahela* and ordered to the *Machias*.

Asst.-Surgeon C. H. De Lancy, detached from the *Buffalo* and ordered to recruiting duty with Ensign D. C. Hanrahan, at Knoxville, Tenn.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Oct. 30, 1902:

Assistant Surgeon-General H. D. Geddings, detailed to represent the service at the meeting of the Association of State and Provincial Health Officers at New Haven, Conn., October 28-29.

Surgeon W. P. McIntosh, granted leave of absence for 15 days from November 1.

Asst.-Surgeon J. F. Anderson, detailed as assistant director of the Hygienic Laboratory.

Asst.-Surgeon V. G. Helser, to proceed to Washington, D. C., for duty.

Asst.-Surgeon Carl Ramus, granted 15 days' extension of leave of absence from October 25.

Asst.-Surgeon A. J. McLaughlin, relieved from duty in the Hygienic Laboratory and directed to proceed to New York City (Stapleton) and report to medical officer in command for duty and assignment to quarters.

A. A. Surgeon E. Alexander, granted leave of absence for 5 days from November 1.

A. A. Surgeon C. B. Ford, granted leave of absence for 15 days from Oct. 18, 1902, on account of sickness.

A. A. Surgeon E. T. Hargrave, granted leave of absence for 30 days from October 12.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 1, 1902:

SMALLPOX—UNITED STATES.

California: San Francisco, Oct. 12-19, 3 cases.
Illinois: Chicago, Oct. 18-25, 7 cases.
Indiana: South Bend, Oct. 18-25, 1 case.
Maine: Biddeford, Oct. 18-25, 2 cases.
Massachusetts: Oct. 18-25, Cambridge, 2 cases; Malden, 1 case; Marlboro, 1 case.
New Hampshire: Oct. 18-25, Manchester, 1 case; Nashua, 18 cases.
New York: New York, Oct. 18-25, 3 cases.
Ohio: Cincinnati, Oct. 18-24, 4 cases; Cleveland, Oct. 18-25, 24 cases, 7 deaths; Youngstown, Oct. 18-25, 4 cases.
Pennsylvania: Oct. 18-25, Erie, 7 cases; Johnstown, 6 cases; McKeesport, 7 cases; Pittsburg, 43 cases, 4 deaths.
Utah: Salt Lake City, Oct. 18-25, 6 cases.
Wisconsin: Milwaukee, Oct. 18-25, 22 cases.

SMALLPOX—FOREIGN.

Barbados: Sept. 28-Oct. 13, 290 cases, 11 deaths.
Canada: Quebec, Oct. 11-18, 2 cases.
Ecuador: Guayaquil, Oct. 4-11, 4 deaths.
France: Rheims, Oct. 5-12, 1 case.
Gibraltar: Oct. 5-12, 1 case.
Great Britain: Bristol, Oct. 4-11, 1 case; Edinburgh, Sept. 27-Oct. 4, 2 cases; Liverpool, Oct. 4-11, 5 cases, 1 death; London, Oct. 4-11, 2 cases; Manchester, Sept. 27-Oct. 4, 1 case.
India: Bombay, Sept. 23-30, 1 death; Madras, Sept. 13-19, 1 death.
Italy: Naples, Oct. 6-13, 4 cases; Palermo, Sept. 27-Oct. 11, 9 cases, 3 deaths.
Russia: Moscow, Sept. 27-Oct. 4, 1 case, 1 death; St. Petersburg, Sept. 27-Oct. 4, 5 cases, 3 deaths.

YELLOW FEVER.

Colombia: Panama, Oct. 13-20, 7 cases, 1 death.
Costa Rica: Port Limon, Oct. 16-23, 1 case.
Ecuador: Guayaquil, Oct. 4-11, 2 deaths.
Mexico: Mexico, Oct. 12-19, 1 death; Tuxpam, Oct. 14-21, 1 death; Vera Cruz, Oct. 18-25, 10 cases, 3 deaths.

CHOLERA.

China: New Chwang, Aug. 31-Sept. 13, 68 cases, 64 deaths.
Egypt: Oct. 12-18, 705 cases, 636 deaths; Alexandria, Sept. 27-Oct. 4, 129 cases, 120 deaths.
India: Bombay, Sept. 23-30, 1 death; Calcutta, Sept. 20-27, 11 deaths; Madras, Sept. 13-19, 1 death.

PLAGUE—UNITED STATES.

California: San Francisco, Oct. 11, 1 case, 1 death; Oct. 16, 1 case, 1 death.

PLAGUE—INSULAR.

Hawaii: Honolulu, Oct. 16, 1 death.

PLAGUE—FOREIGN.

India: Bombay, Sept. 23-30, 76 deaths; Calcutta, Sept. 20-27, 15 deaths; Karachi, Sept. 21-28, 21 cases, 18 deaths.

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Address.

CONCERNING SOME VACCINAL ERUPTIONS.

CHAIRMAN'S ADDRESS, DELIVERED BEFORE THE SECTION ON CUTANEOUS MEDICINE AND SURGERY, AT THE FIFTY-THIRD ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, AT SARATOGA SPRINGS, N. Y., JUNE 10-13, 1902.

HENRY W. STELWAGON, M.D.
PHILADELPHIA.

The privilege of presiding over the deliberations of so active a Section as that of Cutaneous Medicine and Surgery is one that I deeply appreciate, and I thank the members for this honor and evidence of their confidence. It is a department of medicine which has in the last twenty-five years made a phenomenally progressive growth in this country, passing from that of scant mention in the rosters of instruction in our colleges to that of a fair share in the regular curriculum, and with rare exceptions to the standing of an examination branch. This is owing to such bodies as this and similar organizations, as well as to the activity of individual workers. While the diseases which it includes are of relatively small gravity and fatality, yet they constitute a class which give rise to considerable physical discomfort, mental depression, personal and often repulsive disfigurement, and in a large number of cases to loss of occupation or incapacity to earn a livelihood. Moreover, the branch includes some diseases which are actively contagious, and others moderately so, and for this reason alone is entitled to full consideration in the training of medical men.

From the standpoint of the public welfare the state should not admit applicants into the field of general practice unless sufficiently competent to recognize and treat contagious and infectious maladies, not only of this, but of all other departments of medicine. State examiners have not yet sufficiently taken this point into consideration, and it should be our duty to urge this and for the public to insist that in the tests of qualifications that contagious diseases should be given a conspicuous place. Moreover, as regards the diseases of our own branch, it is only necessary to mention the various centers of contagion, such as children's asylums, children's schools, day nurseries, barber shops, the common bath and toilet room, laundries, steerage quarters on steamships, etc., as to suggest also the propriety of sanitary inspection of such places.

It is not my purpose, however, to dwell on such aspects of our branch. Nor is it my intention to follow strictly the general custom of the chairman and give a brief review of dermatologic literature and advances of the past year. I had already prepared some data for

remarks in this direction, more especially on the two subjects which the past year or two have brought prominently into the foreground—the value of the various plans of light treatment and the new field opened up by the contributions on blastomycetic dermatitis. The receipt of the printed program showed me that the former is to be well cared for by others at this meeting, and that of blastomycetic dermatitis is soon, I have learned, to be succinctly and thoroughly reviewed by the two gentlemen, Dr. J. N. Hyde and Dr. F. H. Montgomery, to whose labors we owe very largely our knowledge of these cases.

Such being the facts, I thought it unfair to anticipate the contributions of these gentlemen, who have kindly and cordially extended their co-operation toward making this meeting a successful one. I shall therefore take the liberty of departing in a measure from the usual custom, and briefly refer to another subject, which has, especially the last year or two, interested us all—that of vaccinal eruptions. From time to time, it is true, these have received the attention of some of our number or others of our colleagues, more particularly Behrend,¹ Thin,² Morrow,³ Malcolm Morris,⁴ Frank,⁵ Dyer,⁶ Carter,⁷ Sobel,⁸ Allen⁹ and Van Harlingen.¹⁰ Various classifications have been proposed, that by Malcolm Morris being the one most generally accepted, and which has been practically adopted by Crocker, Frank, Van Harlingen and others. Morris divides these cases into two divisions: 1. Eruptions due to pure vaccine inoculation, and 2, eruptions due to mixed inoculations. Frank has modified and enlarged this somewhat, and his arrangement with a few immaterial changes seems to me for the present the most appropriate one. Under this classification we have three divisions:

1. Due to vaccine virus.	Local...	Local erythema. Dermatitis. Local vaccinia. Adenitis.
	Systemic.	More or less generalized erythema (erythema vaccinicum, roseola). Urticaria. Erythema multiforme. Vaccinia (generalized vaccinia). Purpura.
2. Due to mixed inoculation introduced at time of vaccination or subsequently.	Local...	Impetigo contagiosa. Furunculosis. Cellulitis. Erysipelas. Gangrene. Tuberculosis cutis.
	Systemic.	Gangrene. Pyemia. Syphilis. Leptosy. Tuberculosis.
3. Sequelæ of vaccination.		Eczema. Urticaria. Pemphigus. Psoriasis. Furunculosis.

It is true that to some extent these divisions are often more or less arbitrary, as there is some difficulty in

placing some affections on exact etiologic local or systemic relationship. Moreover, it might be open to question as to whether absolutely pure vaccine virus is capable of producing some of the eruptions attributed to it, and this expression, it seems to me, must be accepted in a relative sense. Some of the eruptions named are quite frequently observed, others are much less common, others again are rare, and several are of somewhat questionable relationship. I shall not discuss the numerous affections named, but shall refer only to several of those of special interest. The most frequent and usually more or less evanescent and harmless of these are the localized or general erythema, urticaria, erythema multiforme, a regional vaccinia or vaccinia-like eruption, impetigo contagiosa and a pseudo-erysipelas or erysipelas inflammation or other accidental regional dermatitis. The most important of these, dermatologically speaking, are erythema multiforme, urticaria, pemphigoid eruptions and impetigo contagiosa. The last, which need be but casually mentioned, may present at any time from the date of vaccination till perfect healing has taken place, being most common in my experience toward the end of the first week. It may be slight and practically limited to the region or immediate neighborhood of the vaccinated point, or it may be extensive, and even somewhat generalized. In these latter instances there is a disposition in some cases to bullous development and sometimes a simulation of a pemphigus, but they are less alarming in aspect and of shorter duration and have typical impetigo lesions intermingled. It is not improbable that some of the examples of general vaccinia, the existence of which has been called in question, are instances of moderately developed impetigo contagiosa. Erythema multiforme and urticaria present at any time between the first day and the crusting period, but may, especially the former, appear much later. Behrend believed that there were two periods at which these and most other vaccinal eruptions occurred—in the first three days and not until the eighth or ninth. While this is true to some extent, it is far from being the rule, for there are many exceptions, and the pemphigoid eruptions, to be later referred to, often appear in the third or fourth week, and sometimes one or two weeks after complete healing. Allen and Sobel found urticaria the most common of the generalized eruptions, and occurring between the fifth and fifteenth day, usually the ninth or tenth. It is interesting to note that Allen in the past several years had in a clientele of 10,000 skin cases, mostly children, 600 of vaccinal eruptions, of which 100, or 1 in 6, were of generalized distribution. In my own dispensary practice, which is made up of a fairly large proportion of children, I should say that the most frequent generalized manifestation is a mixed type of urticaria and erythema multiforme, or possibly better described as an erythema multiforme with often itching and other features of urticaria.

The urticaria observed presents practically no special peculiarities from the ordinary type, except that it is apt to be of longer duration and, I believe, shows much more frequently a more marked tendency to vesicular capping, and vesico-bullous and bullous development. This was also noted by Allen and Sobel. In erythema multiforme the erythematous, papular and tubercular manifestations are most common, and as Hardaway¹¹ pointed out the latter are often quite large in size. But the same vesico-bullous and bullous disposition is, however, judged by my experience, likewise noted in these cases, the bullous development especially being

often exhibited, so much so and so predominantly in some cases as almost to entitle them to be classed as vesico-bullous and bullous dermatitis herpetiformis or pemphigus. These latter cases are frequently of long duration. Dyer states as to his experience that in the final dissolution stage of the local sore there may arise varieties of the erythema multiforme group, in any of its types, either singly or combined. In a number of instances he observed the occurrence of a persistent eruption, relapsing over a period of months, and lasting in one instance as long as eighteen to twenty months, and which has in every case been characterized by marked symmetry in distribution and arrangement, and the eruption constantly of a vesicular and bullous type, the lesions varying in size from a pinhead to an orange.

A generalized pemphigoid eruption, relatively uncommon, which is observed to follow vaccination, and which, owing to its alarming characters and possibly gravity in exceptional instances, may give rise to anxiety, is that often presenting the combined features of pemphigus, bullous erythema multiforme and dermatitis herpetiformis, but more especially of pemphigus and dermatitis herpetiformis. I have met with three examples in the past year—two adults and one child—the outbreak developing from two to four weeks after vaccination. Two of these could be clearly classed as acute pemphigus, and the other as a persistent bullous erythema multiforme or a dermatitis herpetiformis. In these three instances the vaccination was what is usually described as a good take, but was somewhat slow in healing, the crust remaining adherent a long time. In one case at the end of three weeks there was the appearance beneath the crust of some purulent matter. In these instances the bullous development was extremely extensive, the distribution in one similar to that of erythema multiforme, but in the others that of a well-developed and extensive pemphigus. There were in all constitutional symptoms of malaise, and occasionally slight febrile action and depression, but nothing more serious, and these were extremely slight and almost wanting in the early part of the outbreak. The eruption in these three cases is still persisting, or, I should say, recurring, but is now somewhat scanty in amount with periods of freedom. They had, up to the time when last seen, so far lasted respectively three, four and eight months. These examples are generally devoid of dangerous characters or fatal ending, but they are sometimes alarming and of possible long continuance. Other somewhat similar cases have been reported under the name of dermatitis herpetiformis by Dyer¹² (1 case), Pusey¹³ (1 case) and Bowen¹⁴ (6 cases). In all these instances the subjects were children under the age of 12, mostly 5 to 7, the eruption first appearing from one to five or six weeks after vaccination, most frequently between the second and third week. In all the eruption was tolerably extensive and of long duration, in several of them still continuing at the time of the report, years after its first appearance. In others, after continuing three to six months, there was lessened activity, and in a few complete disappearance. While these cases are relatively benign in character, exceptional instances of the acute pemphigus type are sometimes of considerable gravity and even of fatal ending. A case in point is that reported by Schamberg and Keech¹⁵ in a female child aged 5, developing ten days after vaccination, and which ran a rapidly fatal course. These observers refer briefly to a second case of acute pemphigus in a boy aged 8 following two weeks after vaccination. These various bullous eruptions of the types

just described, while not numerous, are sufficiently frequent to justify the assumption of an etiologic relationship. It is particularly in connection with these cases that the observations and study of the etiology of acute pemphigus by Pernet and Bulloch¹⁴ are of great interest. In their report and analysis of cases in a number of instances the subjects were butchers and the disease had originated from a small wound resulting from their occupation. They report one instance of a pemphigoid eruption which apparently followed inoculation from a similar eruption on the teats of a cow. They also mention other examples where the disease occurred in those having to do with animals and animal products, and instances of the existence of a pemphigus eruption in animals are likewise referred to. I believe these observations may have a distinct bearing on the etiology of some of the eruptions of vaccination, but especially those of the pemphigoid type. The subject is certainly worthy of consideration and investigation.

Exclusive of the eruptions referred to other cutaneous manifestations, excepting the conditions often limited to the region of vaccination, and which need not be specially referred to, are somewhat rare. Eczema developing at the inoculation site or arising on other parts occasionally follows, but probably only in those with a clear eczematous tendency. The possibility of a marked or more than temporary aggravation of an existing eczema as the result of vaccination is, according to my observation, so slight that it should not be considered a bar to this operation. I have, in fact, noted in several instances that amelioration followed vaccination, and in one instance in a chronic case a disappearance of the eczema. Duhring, Tait and others also attest the occasional curative influence in these cases. Colcott Fox noted, in his service in which there were many children, that there was practically no relationship between vaccination and the development of eczema, and believes that this apparent occasional relationship is simply owing to the fact that eczema is common in those under the age of 5, at which time vaccination is usually practiced. He believes eczema just as frequent under this age in those unvaccinated.

Another generalized disease which has in rare instances taken its start at the point of vaccination or has made its first appearance after this operation, is psoriasis. Klamann,¹⁷ Campbell,¹⁸ Rohe,¹⁹ Piffard,²⁰ T. F. Wood,²¹ Hyde,²² Gaskoin,²³ Chambard,²⁴ Rioblanc²⁵ and others have recorded such examples, some of which were stated to be in families in which psoriasis had never existed, or at least had not yet appeared. Some of these observers, however, did not consider its appearance more than coincidental. Its occurrence is so exceptional that the latter conclusion seems justified, an assumption of an etiologic relationship scarcely being warranted. The operation may, it is true, by its action as a local or general excitant or by its disturbing influence on the nervous system, be a factor, but even this probably only in those who have a distinct tendency to psoriasis. Van Harlingen seems to have been the only one who has made methodical observations as to the influence of vaccination on the course of previously existing affections of the skin. He states:

During the smallpox epidemic of 1872 I observed all cases of skin disease coming under my notice in which vaccination had been practiced. In a few, some aggravation of the symptoms followed; in others an apparent improvement took place. But in the great majority of cases vaccination did not appear to exercise any influence whatever on the course of the more common diseases of the skin coming under observation. Dur-

ing the present epidemic I have had all the cases of skin disease coming under my notice at the Children's Hospital and in private practice vaccinated so far as I have been able, but the results are about the same as those observed thirty years ago.

Irrespective of the usual transitory rashes, the urticarias, and the erythema multiforme, and the more alarming bullous eruptions, it has been believed ever since the operation of vaccination has been advocated that the process is not without danger as to the inoculation of other more serious diseases, and with careless operators and impure virus the accidental inoculation of tuberculosis, syphilis, leprosy and other affections is not beyond the range of possibility. In fact, as regards tuberculosis, suggestive cases have been recorded by Besnier,²⁶ Perry,²⁷ Little²⁸ and a few others, in which localized integumentary tuberculosis—*lupus vulgaris*—has developed at the point of vaccination. That much being admitted general infection might likewise be produced. A case under my observation of development of *lupus* at the site of vaccination and immediately following the same, is another in point. This patient and two others were vaccinated from the same crust; the reactionary local symptoms in all were severe, in two quickly followed by general symptoms of what seemed as described to me of mixed tuberculous and septicemic character, followed by death. In my patient, at that time a robust young female child, it was followed by the development of *lupus* which had persisted and gradually extended till when I saw her ten to twelve years later it involved an area as large as the palm. The history of the cases was given to me by a physician, the brother of my patient, but owing to the years which had elapsed and the nature of the accident, further details could not be obtained, and there naturally remains an element of doubt about the true character of the condition which carried off the other two.

Examples of syphilis inoculation through vaccination are rarely observed at the present day, and then only through gross carelessness or through pure accident unconnected with the procedure itself; but that it was formerly, while not frequent, occasionally noted, is shown by the observations of Hutchinson, Fournier, Taylor and others. As to the accidental inoculation of leprosy there has long been a belief that such has often occurred, but unquestioned examples are hard to find, and Baum²⁹ was not able to collect any reliable evidence on this point. Daubler's³⁰ two cases are suggestive. Arning³¹ cites an instance of an increase of leprosy in a certain district, called Lahaina, on the Island of Mani, following a year after somewhat extensive arm-to-arm vaccination, but beyond an unusually large development of leprosy cases in a place comparatively free from the disease, there was no positive data to prove the relationship. This observer has demonstrated the presence of *lepra bacilli* in the vaccine lymph taken from a leper, and this tends to show the possibility of such accident in leprosy countries if human virus were used from an unsuspected subject with the malady as yet in an unrecognized state. If, however, the intermediate host theory of the *lepra bacillus* is found tenable, a view now somewhat in favor, such accident would be clearly impossible. In fact, since the practical disuse of human virus such constitutional maladies as leprosy, syphilis and the like can scarcely occur at the present day.

In vaccination, as in any other operative procedure, care, caution and cleanliness are essential prerequisites to safety, and with the proper observance of which the

operation with possibly few exceptions is an absolutely harmless and safe one. It is doubtless true that in some of the exceptional serious accidents of vaccination that neither the operator nor the virus is at fault, but that the damaging infection takes place later as a result of carelessness, negligence and uncleanness on the part of those vaccinated. Moreover, in many instances of eruptions occurring during or immediately subsequent to vaccination it is more than probable that they are purely coincidental, and in no way connected with or due to this procedure, either primarily or through accident secondarily. The layman, and flagrantly the anti-vaccinationists, and sometimes the physician, too, are too prone to consider all eruptions at such times as effects. In short, it should be clearly understood that eruptions occurring at such period are not necessarily vaccinal, although it is true that many of them are. It is clearly unwise and unscientific, however, even for the laudable purpose of quieting the fears of the public or for the purpose of withholding ammunition from the anti-vaccinationists, to deny that vaccination is ever responsible for any eruptive or systemic disturbance. Nothing is to be gained by smothering, concealing or perverting facts. The candid recognition of exceptional complications should lead to a study of their causes, and finally, in all probability, to their prevention or at least to their diminution. In those eruptions commonly observed—urticaria and the various types of erythema multiforme—I believe it is probable that the causative factors lie with the virus itself, either to its preparation or preservation, and possibly due to some admixture or changes in the lymph constituents, and not necessarily of extraneous origin. This seems borne out by the facts that the serums used in the treatment of certain maladies will likewise often produce similar rashes. It is well known that the serum from the horse used in the manufacture of antitoxin will provoke these eruptions, but—and this is the point which it seems to me has a pertinent bearing—according to Berg,³² much less frequently when the serum is thoroughly and carefully filtered. It appears, moreover, extremely probable that the pemphigoid eruptions are likewise due to some toxin or microbic element derived directly from the animal from which the virus is obtained. It is in this direction, then, I believe, that the etiologic causes in the production of some of these various rashes must be sought. But even taking into consideration the exceptional accidental more serious eruptions, their occurrence weighs as nothing as compared to the benefit which vaccination has bestowed on mankind. But with proper care, however, on the part of the caretakers of the cattle, vigorous governmental inspection of the animals and extreme precaution in the collection and preservation of the vaccine, there would be but little to fear. Add to this caution and cleanliness on the part of physician and patient, both before, at and after the time of the operation, till complete healing has taken place, and the occurrence of serious accidents would be practically placed very nearly beyond the bounds of possibility.

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Original Articles.

THE DECENTERING OF LENSES FOR NEAR WORK.*

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The ideal position of lenses, when there is perfect muscle adjustment of the eyes, is such that the visual axes may cut their optical centers, and that the planes of the lenses may be parallel with the equatorial planes of the eyes. When the visual axes cut the optical centers of the lenses there can be no prismatic effect; and when the plane of the lens is parallel with the equatorial plane of the eye there can be no cylindrical effect. A want of parallelism between the plane of the lens and the equatorial plane of the eye means that there will be a cylindrical effect, for, as is well known, the strength of the lens, at right angles to the axis of tilting, is increased, while along the axis of tilting its power is unchanged. Tilting a lens 45 degrees practically doubles its refractive power for the rays that are in a plane at right angles to the axis around which it has been rotated. These laws apply with equal force to lenses that are worn for distant seeing and those that are used in near work. Infringement of these laws constitutes the chief objection to bifocal lenses. If it can be estimated just how much the visual axes must be depressed below the extended horizontal plane of the head, in reading or doing other near work, through the same number of degrees the upper border of the lenses to be used should be tilted forward to prevent cylindrical effect vertically; and each lens should have its nasal border tilted backward to the extent of half the angle of convergence, to prevent cylindrical effect horizontally. This double tilting would make the plane of each lens parallel with the equator of the eye before which it is placed.

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But the subject assigned me by our chairman is "The Decentering of Lenses for Near Work," and to this subject the remainder of this paper will be confined.

1. If there is orthophoria, presbyopic lenses should be properly centered, that is, they should be so placed that each visual axis will cut the optical center of its lens, when a point of fixation is in the extended median plane of the head. On changing the point of view in any direction, without moving the head, the prismatic effect would be the same in kind for each eye, and if the lenses are of equal strength, the degree of prismatic effect would be the same for each eye. The lenses for such eyes should never be so placed that both visual axes would cut them on either the nasal or temporal sides of the optical centers. With safety, and in some cases with positive helpfulness, the lenses may be so placed that the visual axes would cut them directly above the optical centers. As can be readily seen, this would take some work off the subvertor muscles, thus lessening the demand on the second and sixth conjugate brain centers. But orthoptic eyes will not take kindly to presbyopic lenses placed so high that the visual axes would cut them below the optical centers, for this would create an abnormally large demand on the two centers mentioned.

2. If there is uncomplicated esophoria, both presbyopic lenses should be decentered directly out, and to an equal extent, so that the two visual axes may cut the lenses to the nasal side of their optical centers, thus favoring the weak externi. This can be accomplished equally as well by making the frames wider than called for by the pupillary measurement. If the interni are properly attached, the compensating esotropia will be attended by relief, but if attached too low the compensating esotropia would develop a plus cyclophoria that might bring great discomfort. To decenter lenses in, or to have the frames narrower than called for by the pupillary measurements, for such eyes, would render the lenses more or less unbearable.

3. In esophoria complicated only by hyperphoria of one eye and cataphoria of the other, the decentering of presbyopic lenses should be confined to the lens for the hyperphoric eye, and should be down and out, so as to develop a compensating eso-hypertropia of this eye. To decenter the lens out-and-up for the cataphoric eye would result in developing a plus cyclophoria, to correct which the superior oblique would be forced into a state of abnormal tension. Slight abnormal tension is well borne by the inferior oblique, but not by the superior oblique.

4. In esophoria, complicated by hyperphoria of one eye and cataphoria of the other, with plus cyclophoria, the decentering of presbyopic lenses should be confined strictly to the lens for the hyperphoric eye, and should be down-and-out, so as to develop a compensating eso-hypertropia. The rotation in-and-up, made necessary by the prism displacement, generates a minus cyclophoria which, in such a case, would neutralize the existing plus cyclophoria, thus enabling the superior oblique to easily parallel the vertical axis of the eye with the median plane of the head. In such a case the evil-effect of decentering the lens out and up, for the cataphoric eye, comes from the compensating eso-catropia, and is due to the plus cyclophoria that is thus generated. There being already a plus cyclophoria which the superior oblique must correct by being kept in a state of abnormal tension, the added artificial cyclophoria can do nothing but augment the discomfort of the patient.

5. In simple exophoria each presbyopic lens should be

decentered directly in and to an equal extent, or what would be the same in effect, the frames should be made narrower than would be indicated by the pupillary measurement. This would develop a compensating exotropia, and the lenses would be well borne if the externi have ideal insertions or if their insertions are lower than normal; but if their insertions are higher than normal the lenses thus decentered would not be well borne for the reason that the compensating exotropia would develop a plus cyclophoria. Presbyopic lenses, in frames that are wider than indicated by the pupillary measurement, can not be borne by an exophoric.

6. In exophoria complicated by hyperphoria of one eye and cataphoria of the other, the decentering of presbyopic lenses should be confined to the one for the cataphoric eye, and should be in-and-up. This would develop a compensating exo-catropia; that is, the eye would be rotated out-and-down. Every such rotation of an eye develops a minus cyclophoria which the inferior oblique can correct easily. Decentering the lens in-and-down, for the hyperphoric eye, would cause a compensating rotation out-and-up, which would develop a plus cyclophoria, the correction of which would not be easily borne by the superior oblique.

7. In exophoria complicated by hyperphoria of one eye and cataphoria of the other, with plus cyclophoria, the decentering of the presbyopic lenses should be confined strictly to the one for the cataphoric eye, and should be in-and-up. The compensating exo-catropia, that is, the rotation out-and-down, would develop a minus cyclophoria which would more or less completely neutralize the existing plus cyclophoria. To decenter the lens for the hyperphoric eye in-and-down would cause a compensating exo-hypertropia, that is, a rotation out-and-up. This would develop artificially a plus cyclophoria which, grafted onto the plus cyclophoria already existing, would only add to the discomfort of the sufferer.

8. In hyperphoria of one eye and cataphoria of the other, with or without plus cyclophoria, the decentering of presbyopic lenses should be confined to the one for the hyperphoric eye, and should be directly down. There would be caused a compensating hypertropia. This would develop a minus cyclophoria which the inferior oblique would counteract readily. To decenter the lens directly up for the cataphoric eye would cause a compensating catropia which would develop a plus cyclophoria not easily correctible by the superior oblique. The trouble with such a lens would be emphasized if the artificial plus cyclophoria should be grafted onto an existing plus cyclophoria.

9. In double hyperphoria uncomplicated, both presbyopic lenses should be decentered directly down, and to an equal extent; or, what would be the same in effect, the nose-bridge should be made deep enough to allow the visual axes to cut the lenses above their optical centers.

10. In double cataphoria uncomplicated, if any decentering should be done at all it should be directly up.

11. If there is plus cyclophoria only, in a presbyopic case, both correcting lenses should be decentered down.

The decentering of lenses, or prisms in positions of rest, is only one way of dealing with muscle errors. I believe the rules given above are scientific, and that, if followed, comfort from the lenses will be experienced, provided the prismatic effect is not too much. The maximum vertical prismatic effect should be placed at one degree, certainly not more than two degrees, and the maximum lateral prismatic effect should be placed at two degrees, certainly not more than four degrees. In the

greater number of cases the prismatic effect should correct about one-half the manifest error, but in some cases a full correction, especially of a small vertical error, may be given.

Prisms and decentered lenses interfere with some of the visual judgments and therefore are objectionable. For this reason it is better to cure muscle errors of low degree by proper prismatic exercise. Muscle errors of high degree should be treated surgically.

THE GENESIS AND TREATMENT OF THE MYOPIC EYE.*

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There is no more interesting or important chapter in ophthalmology than that which treats of the etiology, nature and treatment of the myopic eye. The widely differing views which have been expressed regarding each of these points seem to justify a renewed presentation of the subject.

HISTORY.

The observations made in the early part of the century by James Ware regarding the relatively greater prevalence of myopia among the educated portions of the community were verified by the later examinations in the schools by many observers, who demonstrated its steadily increasing percentage as the children advanced in age and school progress. Since this was associated with a nearly equal fall in the percentage of hypermetropic eyes it required but a step to the seemingly logical conclusion that the small hypermetropic eyeball of childhood increased in size with the physiologic growth of the child into emmetropia and from this into the large myopic eyeball; in a word, that the myopic eye was a physiologic evolution. Closely allied to this was the proposition that, since only those eyes which are subjected to the demands of civilized life were observed to undergo this change of refraction, therefore it was the eye of civilization, a species of social evolution, an adaptation to the act of work.

More careful observations of the conditions, however, revealed the fact that these conclusions were untenable, since they must be maintained in face of well-known and characteristic pathologic conditions associated with myopia, which imperiled the integrity of the eye, e. g., posterior staphylomata, choroidal atrophies at the temporal border of the optic nerve and in the region of the fovea, a fluid, i. e., a degenerate vitreous with floating opacities and frequent detachment of the retina, all of which sustained with myopia an intimate and undoubted relation of cause and effect. Increasing experience and painstaking observation have served, after nearly half a century, to maintain and enforce the truth of the early teaching of Donders, to the effect that the myopic eye is a diseased eye.

Accepting the proposition as stated, it is obvious, therefore, that myopia can not be regarded as either a physiologic or sociologic evolution, but is to be viewed as one of the many baneful results of civilized life over the physical well-being of the race. The problem presented for solution is its prevention.

GENESIS OF THE MYOPIC EYE.

The observations of Cohn and others showing the rapidly increasing percentage of the disease during the

educational process led thoughtful observers to inquire into its cause. Since it was evidently in some way closely related to the work in the schools it was ascribed to the bad hygienic environments of the school room, and an era of improvement was inaugurated in the lighting of the school houses, the arrangement and construction of desks and seats, the paper and type used in school books, etc. A few years later a re-examination of the same children under the improved conditions of work, much to the disappointment of these industrious and careful observers, discovered no notable diminution in either the percentage of increase or in the arrest of the progress of the myopia in those already myopic at the first examination. It was obvious, therefore, that some hitherto unnoticed factor was responsible for the genesis of the myopic eye.

The earliest suggestion with which I am familiar of the possible relation between astigmatism and myopia was made by Dr. Green¹ of St. Louis in 1867, and again² in a paper in 1871. He closes the latter paper with the statement that so far as he knew statistics of large numbers of eyes to establish the frequency of astigmatism were wanting. My own statistics collected in the Philadelphia schools, 1878 to 1881, were, so far as I know, the first to establish the truth of Dr. Green's suggestion, of which I was at the time entirely ignorant. In 1880 I published³ a group of cases which, while under observation, had passed from hypermetropic into myopic astigmatism without at any time becoming emmetropic. That is to say, they passed through the turnstyle of astigmatism from hypermetropic to myopic refraction. They were all asthenopic, and the increase of refraction was associated with disease of the intra-ocular tunics. This publication was followed in 1881 by the report of the school statistics,⁴ which revealed a group of interesting and important facts bearing on the genesis of the myopic eye.

First. The emmetropic eye not only remained in a nearly uniform percentage through all ages of school life, but enjoyed the highest acuity of vision and was relatively free from pain and disease.

Second. The eyes with a simple hypermetropia stood next to emmetropia in all these respects.

Third. The eyes with hypermetropic refraction, especially where astigmatism was present, manifested symptoms of asthenopia, lowered acuity of vision and pathologic states of the fundus; notably irritative and absorption changes throughout the fundus, granular changes at the fovea and crescents of choroiditis at the temporal margin of the optic disc in all stages of development from a faintly outlined crescent to far advanced atrophies which had before been regarded as physiologic anomalies when seen in hypermetropic eyes, but as pathologic if associated with myopic refraction.

Fourth. It was shown, as had been demonstrated by all observers, that not only did the myopic eye increase in percentage during school life, but that there was a closely corresponding diminution in the percentage of hypermetropia. This group of facts seemed to afford a sufficient demonstration for the conclusion that the myopic eye, with its characteristic pathologic changes in the fundus, was but a later stage of the conditions witnessed in the eyes with hypermetropic astigmatism, hence that the former was recruited from the latter.

Fifth. In the very large percentage of congenitally

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1. American Journal of the Med. Sciences, January, 1867.
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defective, that is to say, eyes with hypermetropic astigmatism which were shown to exist in the schools, we have, therefore, a sufficient explanation for the steadily increasing percentage of myopia notwithstanding the improved environments of the school room.

This was essentially a new view of the subject of myopia. The question of heredity resolved itself into a hereditary transmission of the anatomical defect on which the underlying pathologic conditions resulting from eye strain depended and which, in turn, led to the impaired nutrition of the ball and the distention of its coats. The malformation of the eyeball, that is to say, astigmatism, and the faulty binocular balance so frequently observed in astigmatic eyes, doubtless sustain a very important relation to certain distortions of the skull and abnormalities in the shape and size of the bony orbit. We have, therefore, primarily a congenital anatomical anomaly as the starting point or basis for the chain of events we have been considering. The truth of these propositions finds marked confirmation in the daily routine of office work, where we much more frequently find the children of myopic parents with hypermetropic astigmatism than with myopia, which, if carefully corrected, removes the asthenopia and associated conditions which are the starting point for the myopic eye. Indeed, it is, in my experience, extremely rare to find a myopic eye before the school age.

TREATMENT OF MYOPIA.

The treatment of myopia should therefore be conducted with this chain of events in mind. In a word, it should be begun before myopia is established. I have already shown⁶ that in 200,000 eyes corrected by glasses in Philadelphia in twenty years, that the number of eyes with myopic refraction applying for relief fell from 28.43 per cent. in the first period to 16 per cent. in the last, a diminution of approximately 50 per cent. It is apparent, therefore, that our highest duty is in preventing the disease. It was to this end that in 1881 I first urged the importance of examining the eyes of every child at the beginning of the educational process in order to determine if the eyes were fitted to safely undertake the strain of school life. Unfortunately, the myope is with us and requires at our hands the highest skill and solicitous care to ward off its baneful results.

It is obvious from the foregoing conclusions that treatment resolves itself into two factors: First, attention to the pathologic conditions; second, the careful correction of the anomaly of refraction and accommodation and any of the associated abnormalities of ocular balance.

I wish at the outset to urge that no final attempt should be made to prescribe correcting glasses until the fundus conditions upon which the progressive near sight depends shall be brought under control. To this end the following routine treatment has in my own hands been of value. Complete rest from all near work, the steady and persistent use of a mydriatic, protection from light by smoked glasses, the temporary abandonment of the accustomed correcting glasses, the internal administration of the so-called alterative drugs, e. g., potassium iodid and bromid with the bichlorid of mercury, iodid of iron, etc., and the careful attention to the general regimen. This method will usually lead to a more or less speedy relief from the asthenopia and to marked improvement in the condition of the uveal tract. Then, and not before, a careful and painstaking study should be made of the refraction of each eye separately. It is by no means

an easy task to determine accurately the exact static refraction at the macula in high myopia. Therefore, not only patient subjective study with glasses and test cards, etc., should be employed, but the results so obtained should be checked and verified by the objective methods we now have at command.

It is very easy, indeed, to overlook the lower grades of astigmatism, especially if the corneal meridians are heteronomous, a very common condition in myopic eyes. The static refraction of each eye having been determined, we can now for the first time, with any degree of accuracy, study the state of the binocular balance. This should be done with carefully centered correcting glasses, placed in some fixed form of apparatus, the eyes being maintained in the primary position. When studied in this way we soon learn to revise many of the views formerly entertained regarding the mobility of the myopic eye. The great frequency with which a dark ruby glass, or the multiple Maddox rod, or some other suitable device, will reveal a faulty binocular balance, was to me at first a great surprise, but not more so than the promptness with which the asthenopic and irritation symptoms disappeared when this was corrected, either by a glass or by tenotomy in suitable cases. This, however, is to be expected when we consider the essential anatomical basis or origin of both the astigmatism and the faulty attachment of the muscles of the globe.

In the higher grades of astigmatism not only are the corneal meridians likely to be heteronomously placed, but it is comparatively rare not to find an absolute heterophoria due to the faulty attachment of one or more of the ocular muscles.⁶ It is in this fact and to the associated anisometropia rather than in the large ball that we find adequate explanation for the recognized difficulty of binocular vision in many cases of high myopia. It is important in the determination of the ocular balance to avoid deception growing out of the presence of eccentric fixation in one or both eyes caused by small, partial or complete, macular scotomata, so common in high myopia.

I have seen many cases of progressive nearsight in which the tendency to progression, the asthenopia and the choroidal disease were rebellious to all treatment and to the most careful corrections of the anomaly of refraction until the binocular balance was corrected, either by suitable adjustment of prisms or by tenotomy or advancement of the faulty muscles. Many illustrations and instructive examples would be cited if time permitted.

Should full correcting glasses be worn in high myopia? I invariably prescribe full correcting glasses for myopia of 12 D. or less, but if the myopia is higher than 4 or 5 D., under correcting glasses are given for near work, the allotted far point chosen depending upon several factors, e. g., the age of the patient, the power of convergence and the nature and the amount of work required; the condition of the fundus and the tendency to progression of the disease. When the tendency to progression is marked the full correcting glasses are allowed only out of doors, the undercorrecting glass to be worn constantly in the house until the progression is arrested. In many cases bifocal glasses are ordered. If the convergence is weak or painful, a prism, base in, is secured by decentering the glasses or by having the near work glasses ground on a prism with base in, or a somewhat stronger glass is given. If esophoria is present at 6 m. a weaker glass is prescribed, so that all near

work is done at the remote point of the glass, and thus all strain taken from the accommodation, which relieves the tendency to undue convergence. In myopia of 15 D. or higher a full correcting glass is rarely desirable or safe and usually is not well born at any age, certainly not when the usually critical fundus changes are present. For such patients I usually prescribe a glass for constant wear, deducting from 3 D. to 5 D., and allow a lorgnette of 3 D. or 5 D. to be placed in front of the under-correcting glasses temporarily when the full correction of the myopia is necessary or desirable to secure accurate distance vision.

RESULTS OF TREATMENT.

What have been the results of these methods of treatment? I have a long list of myopic patients who have been under more or less continuous observation for many years, some for twenty years or more. I have witnessed during these years many instances of separation of the retina, but they have occurred, with but three exceptions, in patients who came for the first time because of this unfortunate accident.

In these exceptions one, an eminent physician with astigmatism = 3 D. in each eye and an additional myopia of 20 D. in the right eye and 18 D. in the left, was knocked down by a bicycle and rose with detachment of the retina in the right eye, which was rapidly followed by opacity of the lens. The left eye became irritable after this accident and slowly developed a small macular atrophy. He had been under my personal observation and care since 1875.

The second exception, a German, aged 49 years at the time of his accident, a head bookkeeper for a large manufacturing firm, had high astigmatism and myopia of 12 D. He had been under treatment for eight years without increase of myopia and had pursued his work without difficulty. After an absence of two years, during the latter part of which he had been in impaired health and had suffered much from headache and weak eyes, he returned with a separation of his retina on the right side, which had come on suddenly the day before after reading late into the night. He was placed in a recumbent posture, atropia instilled and a compressive bandage applied. Under this treatment the detachment was slowly reduced and V. rose to 6/9. This continued for several weeks and he returned to his counting room, but not to work. He started from his home to my office and on the way noted in the cars that he was able to read a printed postal card with the injured eye alone. Reaching the city he ran a short distance and sprang onto a moving street car. The vision at once became blurred, and I found on his arrival at the office that the detachment had recurred.

In the third case detachment had occurred in the left eye when first seen, and in a few months occurred in the right in spite of treatment. Here also there was high astigmatism and additional myopia of 17 D. He was a professor of mathematics, busily engaged in his class work, a hard student, and, as he had a large family dependent upon his salary, refused to abandon his work even temporarily. His choroiditis progressed, a macular hemorrhage occurred and was speedily followed by extensive retinal detachment and blindness. With these exceptions I have seen no retinal detachment occur in my practice among patients under treatment. Macular atrophies which had not already occurred when first seen have been comparatively rare. I have seen no case of myopia progress under my own observation beyond 7 D., and but one of these. Any progression after the

first treatment and correction has been exceptional, and could then usually be ascribed to some imprudence upon the part of the patient, e. g., the neglect of the near work glasses or an inordinate amount of work. A number of cases of increased refraction have occurred after attacks of severe general disease.

These views could be exemplified by many illustrative cases. The following presents many interesting features:

CASE 1.—T. H. P., school boy, aged 8, was brought to me from the interior of Pennsylvania in March, 1879, suffering from weak and red eyes, headache and vision reduced to 1/10 in the right and 1/5 in the left. His mother who accompanied him and a sister aged 6 both had hypermetropic astigmatism. The father was deceased and the state of his refraction unknown. The sister's eyes were studied carefully, revealing a honeycombed choroid and a yellowish crescent of choroiditis at the temporal margin of both nerves. She often complained of headache. The eyes watered in the sunlight and became flushed. Treatment and correction of the refraction error was advised but the advice neglected. She was not seen again until 1898, nineteen years afterward, when she came under treatment with myopic astigmatism and a posterior staphylomata in both eyes.

In the boy the ophthalmoscope revealed an apparent myopia of 4 D. in the right eye and 3 D. in the left. He had a broad yellowish crescent in both eyes and the choroidal stroma was visible in large areas throughout the fundus. After the prolonged use of atropia he received for constant wear —1.50C—1c. ax. 20° in the right and 160° in the left which gave V.=20/LXIV in each eye not improved by a stronger glass. He returned in June, 1881, at the close of his school year with vision reduced with his glasses to 20/160 in the right and 10/200 in the left. The fundus changes had greatly increased. He then received the iodid and bromid of potassium internally and atropia was used three times daily for two weeks. He would then accept no change in the right glass, but vision rose to 20/40. On the left the myopia had increased to 2 D. The astigmatism remained as before. He was not seen again until 1896, fifteen years after. He was then driven from work as a clerk by his bad eyes and headache. He had in the meantime been under advice of a local surgeon, who had given him successively stronger spherical glasses until at the time he was wearing —5 D. sp. before the right and —6 D. sp. before the left, both for distance and for reading. With these V.=6/XV. The astigmatism had been neglected. He had blephorospasm and frequent attacks of violent sick headache. There were large posterior staphylomata, macular disease in both eyes with fluffy fundus and absorption areas. A mydriatic and smoked glasses were once more prescribed together with complete rest, and alteratives internally. These were continued for two weeks, when he selected the following glasses: O.D.—4.00C—1.50c. ax. 30° V.=6/VII½, O. S.—5.00C—2.00c. ax 150° V.=6/IX. He then returned to his work with an undercorrecting glass for reading and writing, but the headache speedily returned and vision fell in less than a month to 6/XV and 6/XXIV. A mydriatic was again instilled and while waiting in the office V. rose to 6/VII½ and 6/IX respectively. A careful study of the ocular balance showed an esophoria =10° at 6m. and a right hyperphoria of 5°. After sitting with the vertical prism and his correcting glasses the esophoria disappeared. He wore a trial prism for a week and returned without headache and no diminution in his acuity of vision. I then did a tenotomy of the right superior rectus, correcting accurately the vertical deviation. He returned in a month to his clerical work. His eyes remained weak for several months but gradually improved in all respects both in ability for work and in the fundus conditions. There has been no tendency to increase of the myopia and for five years he has pursued the arduous duties of a clerk in a railroad office free from any serious trouble.

Several points are illustrated by this young man's experience. In the first place, the repeated value of the therapeutic treatment by mydriatics, etc., but notwith-

standing this the steady advance of the myopia until both the astigmatism and hyperphoria had been corrected. Second, the evil of ordering, carelessly, successively stronger spherical glasses to improve the distance vision. Third, that in the presence of imperfect binocular balance the most carefully chosen glasses correcting the astigmatism did not secure his safety or comfort; and, finally, the arrest of the disease by correcting the ocular balance and by the careful correction of the anomaly of refraction. Time will not permit any extended discussion of many important points, but one must be noted, viz.: The importance of an under-correcting glass for all near work, and a full correcting glass for distance, both of which shall provide a common far point for each eye.

DISCUSSION.

DR. EDWARD JACKSON, Denver—It is, of course, impossible, and I suppose not desired, to attempt any complete discussion and review of this extremely interesting and valuable paper. I shall only take up, therefore, a few scattered points. With reference to the genesis of high myopia, in all of the cases that I can now recall, seen in early childhood, it has happened that there has been nothing pointing to heredity. I have seen comparatively few cases of high myopia in young children, but it happens that none of them had myopic parents. They did show, however, marked evidence of ill-health, disturbance of nutrition; and it seemed to me that was an important factor in the genesis of their myopia. I am also inclined to think it is important from the fact that the most rapid increase of myopia I have watched has occurred after some temporary severe impairment of the general health and nutrition.

There can be no doubt that the development of myopia during school life is common, and myopia developing in that way has two causes: one, the congenital defects, including astigmatism and possibly malformations of the orbit and attachment of ocular muscles; the other, the close work of school-life, and the use of the eyes under unfavorable conditions. We do not see in young people not exposed to school life the same development of myopia. Near work is one of the elements. Myopia in general may be taken as developing from these congenital defects and near work. In high myopia I believe an additional factor comes in in the use of the eyes under the conditions under which uncorrected myopic eyes must work.

My experience points to the importance of the careful correction of the refraction as a means of preventing the development of high myopia; that if that is attended to the myopia never becomes very high, unless it has already reached pretty nearly the limit before the correction is applied. Generally the progress ceases with full correction. It remains stationary for a time while there may be some change in astigmatism. But if change is once started so that the correction becomes imperfect, the myopia increases.

In the treatment, laying aside the correcting lenses for a time is important if the lenses are not the proper ones. Lenses should be laid aside until the correct ones can be determined. But, as soon as the correct lenses can be ascertained, the patient is better off to wear them. It may be wise to continue the mydriatic in some cases, but the correcting lens should be put on as soon as it can be ascertained.

With reference to the partial correction for near work, under Dr. Risley's teaching I practiced that for some time, but in time gave it up. While I feel that it is necessary in very exceptional cases, I think the better rule is to give the full correction for everything. I think the full correction, by encouraging the child to use the eyes more for seeing distant objects, is an extremely important means of influencing him to adopt those occupations that are not so likely to produce increase in the myopia. I feel about giving a partial correction for near work a good deal like Professor Haab feels about having a small size of magnet. If you give full correction the patient uses the eyes to the best advantage.

I would like to call attention to the literature of the past year on the subject, particularly the series of cases reported from Germany, by Pfalz and Heine before the Heidelberg Congress. Pfalz gave three series of cases, one of undercorrection, one of partial correction for near work, and one of full correction for near work. There were about 18 to 25 cases in each series. In the first two series there was but one case in which the myopia did not increase. In the third series, in which the full correction was worn constantly, the percentage that increased was extremely small. The discussion that followed the reading of these papers is still more remarkable, for not one raised his voice in defense of what we have regarded as the old German teaching, but all endorsed more or less completely the use of the full correction.

DR. RISLEY, in closing—I am obliged to Dr. Jackson for bringing out in the discussion the subject of full correcting glasses in myopia. In my paper I urged the wearing of under-correcting glasses only indoors and then only where the tendency to progression was marked. Notwithstanding the views expressed by Dr. Jackson, my opinion is in favor of using under-correcting glasses for near work and indoors in progressive myopia, otherwise there is almost sure to be headaches, discomfort and increased tendency to progression. I have but rarely seen any increase in the myopia when patients have been faithful to the undercorrecting glasses for near work. One other thing that I possibly did not make quite clear is that glasses should be carefully decentered, or ground on prisms with their bases in, certainly where exophoria is present and in extremely tender eyes where the strain of convergence at the near point is painful.

THE NEED OF CORRECTING AMETROPIA AFTER MIDDLE LIFE.*

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The Century Dictionary says that "By a middle-aged man is generally understood a man from the age of 40 to 50." Presbyopia is usually supposed to begin between the ages of 40 and 46, although, with Donders' liberal definition of presbyopia, it may be present at the age of 30 years. Presbyopia, of itself, is properly treated by the wearing of an artificial substitute for the quota of accommodation that has been lost, because of the diminution in the elasticity of the crystalline lens—a diminution incident to advancing age. Convex lenses or an equivalence of their optical power in cases in which lenses need to be used for the correction of ametropia, constitute such substitute for lost accommodative power. This being true, it is primarily essential that concomitant ametropia receive due attention, when glasses for the relief of presbyopia are chosen, the effect of such attention having the form of modification of the strength of the lenses selected.

A common experience of the average oculist may be typified by a hypothesis of a patient whose eyes are hyperopic by one dioptre and whose age is 50: his near-work glasses have collective power, each, of two dioptres: he is fairly robust and wore no glasses till 47 years old, having avoided near-work as much as possible until it became inevitable, when he reluctantly yielded to invincible fate and bought these "No. 18" glasses of his jeweler or grocer. The vendor had a table, gotten at the same time with the sign: "Eyes examined free" and has not dared to go beyond "No. 18" in the case of a customer whose age was not greater than the figures opposite "No. 18," and whose spasmodic accommodation enabled him to read, for the length of time of a "free

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that in this disease some die in whom most of the symptoms are comparatively mild, while others recover in spite of extremely grave conditions:

PULSE RATE.	RECOVERED.	DIED.	TOTAL.
100 to 115.....	80	17—17 per cent.	97
115 to 130.....	80	47—37 per cent.	127
130 to 145.....	25	31—59 per cent.	56
145 and up.....	2	21—91 per cent.	23
TEMPERATURE.	RECOVERED.	DIED.	TOTAL.
99 to 103.....	78	48—38 per cent.	126
103 to 105.....	106	52—33 per cent.	158
105 to 106.....	20	12—38 per cent.	32
106 to 107.....	2	5—71 per cent.	7
107 to 108.....	0	4—100 per cent.	4
RESPIRATION.	RECOVERED.	DIED.	TOTAL.
20 to 35.....	73	17—19 per cent.	90
35 to 45.....	92	41—30 per cent.	133
45 to 60.....	40	51—56 per cent.	91
60 and up.....	2	13—87 per cent.	15

The majority of fatalities occurred in the first ten days. The duration of the disease in the cases that recovered or died, so far as shown by the records, was as follows:

DURATION.	RECOVERED.	DIED.	TOTAL.
1 to 10 days.....	11	48—81 per cent.	59
10 to 15 days.....	14	10—41 per cent.	24
15 to 20 days.....	36	5—12 per cent.	41
20 to 30 days.....	42	6—12 per cent.	48
30 to 60 days.....	39	2—5 per cent.	41

In patients laboring under certain complications the treatment certainly has little influence on the course of the disease. Those given to the excessive use of alcoholic stimulants have a poor chance for recovery, yet in some of these death appeared to be averted by free stimulation. Those suffering from nephritis nearly all died, and in certain other conditions there were no recoveries, as shown in the following table:

COMPLICATION.	RECOVERED.	DIED.	TOTAL.
Alcoholism	8	31—79 per cent.	39
Nephritis	1	5—83 per cent.	6
Delirium (Marked)...	0	6—100 per cent.	6
Syphilis	0	2—100 per cent.	2
Emphysema	0	2—100 per cent.	2

Remembering how often pneumonia is the cause of suppurative pleurisy it is surprising to note that in these 338 cases only one case is reported to have developed empyema.

THE VARIOUS MEDICAMENTS USED.

Among the various measures often employed in the treatment we notice the use of ice caps, the Leiter coil and cold packs, alcohol rubs for delirium or to reduce temperature, and normal salt solution, given either by hypodermic injection or by enema as a stimulant. Bleeding was employed in only one of the 338 cases. Among the numerous medicines administered certain drugs were employed in large proportions of the cases either alone or combined. They are as follows:

For regulation of the bowels:

Magnesium sulphate was used in 183, or 54 per cent.

Calomel (usually combined with sodium bicarbonate) in 138, or 40 per cent.

For their action on the heart:

Aconite or veratrum viride in 98, or 25 per cent.

Strychnia or nux vomica, or their compounds, in 284, or 84 per cent.

Nitroglycerin or ether in 57, or 17 per cent.

Whisky, brandy, port wine, or spirits of cologne, in 193, or 57 per cent.

Digitalis, spartein, caffeine or strophanthus, in 114, or 33 per cent.

For their action on heart or to relieve cough:

The ammonium compounds in 118, or 34 per cent.

Atropin, hyoscyamus or hyoscin hydrobromate, in 87, or 22 per cent.

For their quieting effects:

Opiates, as codein, morphin, heroin, tr. of opium or Dover's powder, in 170, or 50 per cent.

The bromids of potassium, sodium and ammonium, in 52, or 16 per cent.

Guaiacol carbonate was used in only 19, or 5 per cent.

DISCUSSION OF METHODS.

The reader will naturally ask himself whether better results could have been obtained under other methods, especially under the method that he individually favors, and it is not unlikely that he will usually answer the question in the affirmative and that he may be tempted to criticise the methods of treatment in this institution. It should be recollected, however, that the attending physicians are often unable to carry out their wishes and the hospital authorities are often hampered by patients that they can not control. It is certainly true in this institution that it is impossible to manage the treatment of any class of cases as well as they could be managed in a hospital not entirely under political influence.

The writer, while fully recognizing the impossibility of correcting many of the pathologic conditions that are often found at the autopsy, and although fully aware that the majority of cases of disease recover if left to themselves, is still thoroughly persuaded that much may be done for the alleviation of the suffering and the cure of patients sick with croupous pneumonia. An examination of medical literature shows that many others are of like opinion. The management of patients with pneumonia may be arranged under various heads.

DIET.

Liquid diet should be given regularly and in sufficient quantity, though we need have no fear of the patient starving to death; yet, we must be careful not to overload the stomach and thus add acute indigestion with ptomain poisoning to the burden which the patient is already carrying. As a rule, where it can be borne, half a pint of milk, or its equivalent, should be given to an adult every three hours, and it should not be forgotten that the administration of nourishment every half hour or hour is often injurious; because by so doing the stomach is kept in a constant ferment with no time for rest, so that soon the appetite is lost or nausea and vomiting occur, or the food being passed on to the bowels undergoes decomposition, tympanites results and diarrhea may follow. It is important for the physician to ascertain accurately how much nourishment is being given. It is a common experience to ask the friends or nurses how much food the patient is taking, and to have them answer that he is taking a large quantity, when in reality he is not taking more than a couple of ounces once in three or four hours, or even less frequently. Although there is no danger of starvation, we all know from personal experience how weak one may become by deprivation of one or two of the ordinary meals of the day, and as in pneumonia it is of prime importance to conserve the patient's strength, we should be careful that all of the food is taken that can well be digested. Beef juice, beef tea, mutton broth, clam broth, chicken broth or oyster soup all possess more or less nourishment and any of them may be substituted for milk a part of the time to prevent the patient from becoming tired of the milk. Albumin water, prepared by beating the white of an egg in water, may be used in the same way; barley water or rice water, prepared by boiling these grains for several hours in water until the latter becomes of a milky appearance, and seasoned by lemon juice, if the patient desires, may take the place of a certain quantity of milk. When milk is not di-

gested, as shown by disturbance of the stomach or the collection of gas in the bowels or by the condition of the stools, it should be tried in a partly digested form, and when it is disliked its taste may be altered and the after-taste prevented, at least to a considerable extent, by combining it with Vichy water. Unfortunately in some cases the stomach rejects all food and then it is very difficult to sustain the patient. Under such conditions high rectal enemas should be given three times a day of partly digested and easily assimilable nutriment in quantities of not more than 4 to 6 ounces, and these should not be given oftener than 3 times a day, for if given more frequently the rectum speedily becomes intolerant and they will not be retained.

LAXATIVES.

Many physicians favor beginning the treatment of pneumonia with a mild mercurial purge or a saline laxative; nevertheless, I believe that vigorous catharsis is harmful except in rare instances in very robust persons, although it is desirable that the patient should have one movement a day. In these hospital patients salines were employed in 54 per cent. and mercurials in 40 per cent. of all cases. It has been stated that in this disease the liability to death is in direct relation to the cathartics that have been taken; that is, vigorous catharsis, speedy death.

SURROUNDINGS AND LOCAL TREATMENT.

The patient should, if possible, have a large airy room with free ventilation, but drafts should be avoided and the chest should be carefully protected with a view not only to relieve pain, but to prevent the extension of the disease. It may be urged that we have no means of knowing that the extension of the inflammatory process can be prevented in this way; nevertheless, we do know that the continued application of cold or of hot fomentations will greatly modify the progress of inflammation in other parts of the body, and most of you are familiar with healthy people in whom a reduction in temperature of a few degrees in the surrounding atmosphere will cause much discomfort and pain, and if they do not speedily escape from the condition they are liable to attacks of acute rhinitis, bronchitis or rheumatism; therefore, with a patient depressed by so grave a disease as pneumonia, it seems important to afford extra protection.

The chest may be protected by flannels, by pads of wool or cotton, or the time-honored large jacket poultice enveloping the whole side may be employed if it can be kept constantly warm and can be applied without causing the patient too much discomfort. Poultices that are applied every three or four hours are cold most of the time, and doubtless do more harm than good, and in not a few cases the frequent disturbance of the patient who is in need of absolute rest must have a harmful effect; therefore, these should not be employed excepting in specially favorable cases. Under suitable conditions there can be no question that poultices will frequently greatly diminish the pain, and it is believed by many physicians that they to some extent retard the progress of the disease of the lung. In lieu of poultices many physicians have within the past few years employed soft putty-like preparations, which are spread on the chest to a depth of from $\frac{1}{8}$ to $\frac{1}{4}$ inch and covered with a cloth. These are said to have effects similar to poultices in relieving pain, and it is claimed that they also have some influence in checking the progress of the disease. In the great majority of cases I have found the oiled-silk and cotton jacket much more serviceable than

the poultice or any of its substitutes. This jacket keeps the chest warm and moist, and if properly made it can be easily removed for sponging or for watching the progress of the disease. Such a jacket should be made in two parts, lapping several inches at the shoulders and sides, where it is held together by safety pins. It should have a layer of cheese cloth, which will come next to the skin, just outside of this a layer of oiled silk, the cheese cloth being used to prevent the wrinkling of the oiled silk and the discomfort which this is liable to cause if applied directly to the skin. Outside of the oiled silk should be a layer of cotton batting about two inches in thickness, and outside of this another layer of cheese cloth, the whole being loosely quilted together so that the various parts will keep in their normal position. In these hospital patients the death rate was only 30 per cent. when some such protection was used as against 35 per cent. when nothing of the kind was employed.

In the very early stage leeches or dry cups may be applied to the side for the purpose of relieving pain, and it is probably true that in some cases they limit the extent of the inflammation. Leeches are seldom employed, but dry cups may be easily applied and should be used much more frequently than they are. Counter-irritation by mustard, iodine or blisters has also been highly recommended, but it is doubtful whether it is beneficial except in rare cases. This treatment does not seem to me beneficial during the height of the disease, but in the very beginning, that is, before the physical signs become well pronounced, I believe that it is possible in some cases to abort the disease by counter-irritation, and at the close of the attack I think a similar course of treatment may sometimes hasten resolution.

HEART SEDATIVES.

Believing that pneumonia is a fateful disease that can no more be altered in its course than can typhoid fever, the majority of physicians have entirely abandoned venesection and the use of such heart sedatives as aconite, veratum, tartrate of potash and antimony, iodide of potassium, etc. Nevertheless, cases occasionally occur in robust individuals where the pulse is strong and full, the temperature high and dyspnea developed early, in which some of these agents could be beneficially used for a short time, care always being taken not to greatly deplete the patient and not to exhaust his strength. Such sedatives were given in 25 per cent. of these 338 hospital patients (though probably many of them were treated with very small doses in the homeopathic wards). Such treatment sometimes gives immediate relief, and it possibly renders the course of the disease less severe. During the first 24 hours of an attack of pneumonia ergot has seemed to me to diminish the intensity of the symptoms and to lessen the severity of the attack, but all will be agreed that no depressing agent should be used after the disease is thoroughly established. In those very rare cases where there is undoubted plethora, and when there is great dyspnea with much congestion, the drawing of 6 or 8 ounces of blood from the arm appears to be most beneficial. Bleeding was practiced only once in all of these cases.

PAIN.

To relieve pain the application of heat to the chest, as already recommended, should first be practiced, especially in debilitated patients, but in others better results may be obtained from cold. The latter may be applied by the ice bag or the Leiter coil. The coal-tar antipyretics have also been recommended for this purpose,

and in the beginning of the disease, when the temperature is high and the patient in much discomfort, provided the heart is strong, great relief will often be obtained from the administration of 5 or 10 grains of phenacetin, and I believe it can be given without harm to the patient; however, the dose should not be frequently repeated, and remedies of this class should not be given at all after symptoms of heart failure appear; or, in other words, with a pulse running at about 120. As already suggested, cupping will sometimes relieve this symptom promptly. Physicians too commonly quickly resort to the administration of opiates to relieve this symptom, forgetting that in fully 50 per cent. of the human family opiates disturb the digestion, check the secretions, and within a few hours make the patient worse than he was before; forgetting, also, that opiates benumb the respiratory centers and increase the carbonic acid poisoning, which is so potent for harm in pneumonia; nevertheless, there are some cases in which opiates must be given, but it should be as a last resort and administered with great caution. I am confident that many patients are hurried to the grave by the injudicious use of this agent. Opiates were used in 170, or 50 per cent. of the cases under consideration.

COUGH.

Cough is not infrequently a distressing symptom, especially when the pneumonia is combined with a sharp attack of pleurisy, and something must be given to diminish the convulsive efforts which cause the patient so much pain and which undoubtedly increase the congestion of the lungs. For this purpose ammonium bromid in doses of 10 grains every 2 to 6 hours combined with hyoscyamus in moderate doses has been the most satisfactory in my hands, but here again we will sometimes have to resort to opiates, and when we do that preparation that is least likely to disturb the digestion or to give the patient discomfort should be employed: I like codein best. Atropin or hyoscyamus was used in 22 per cent. of these hospital cases.

INSOMNIA.

Sleeplessness is one of the most distressing symptoms in this disease, and not infrequently patients go for two or three days, or even longer, with not more than a few minutes' sleep at any time. As a result they become greatly exhausted and much less able to withstand the ravages of the disease. It therefore becomes important to relieve this symptom. The bromid of ammonium already recommended for relieving the cough tends also to prevent insomnia, or if the latter is the prominent symptom it may often be cured by this drug. The hospital records show that bromids were used in 16 per cent. of the 338 cases. Sulphonal, trional, chloral, chloralose and chlorotone have all been recommended for the same purpose, but chloralamid, which has the reputation of being a heart stimulant, theoretically appears especially adapted to this end, and practically it will sometimes be found most beneficial, though there are some patients in whom it has an unpleasant action. Here, too, opiates are recommended and employed by many physicians, but the treatment appears to me most injudicious. Full doses of whisky sometimes produced the happiest effects in securing sleep for these patients.

TEMPERATURE.

The two prominent indications in the treatment of pneumonia are acknowledged by nearly all physicians to be reduction of high temperature and sustaining the heart. A temperature below 102 is not generally considered injurious and no special efforts are made to re-

duce it, but when it goes beyond this it is a common practice to have the patient sponged, with a hope of reducing the heat one or two degrees; this treatment is repeated every three or four hours as necessary. Sometimes the tub bath, cold packs, or even hot packs, are used for the same purpose, and ice bags or the Leiter coil may be applied over the abdomen or over the affected portion of the chest with the result of quickly bringing down the temperature. Any of these methods under proper conditions and in suitable cases may be employed with apparent benefit. These methods are commonly employed in Cook County Hospital practice. Guaiacol in the quantity of from 20 to 30 minims may be rubbed into the skin, either directly over the affected lung or in other parts of the body, with the effect of speedily reducing the temperature one or two degrees and often of exciting profuse diaphoresis. Although there is some fear of its depressing effects on the heart, there is little danger in this direction if it is employed in suitable quantities. Theoretically, whatever part of it is absorbed should act beneficially on the lung, possibly in diminishing the propagation of the pneumococci and thus lessening the amount of their toxins, and practically it has appeared to act beneficially in many cases. The various coal-tar derivatives have also been used for reducing the temperature, and so long as the symptoms are mild they may probably be employed in small and infrequent doses without detriment to the patient; but with a pulse above 110 they should be used, if at all, with the greatest circumspection; indeed, I think few physicians would at this day recommend them. The alkaline diuretics and diaphoretics, for example, the acetate of potassium and liquor ammonium acetatis, undoubtedly aid in keeping down the temperature, and there is some reason for believing that they may, to a slight extent at least, retard the croupous deposit in the lung or aid in its absorption.

SPECIFICS.

Are there any remedies which possess a specific influence for the cure of croupous pneumonia? I fear not; yet, the remarkable effects claimed for creasote, carbolic acid and the salicylates of sodium and ammonium, and even for chloroform, and the reliance placed on this class of remedies by Andrew H. Smith, would seem to indicate that they possess a power over pneumonia similar to that of quinin over malarial fever and of the salicylates over acute rheumatic fever. From the various facts and opinions collected Smith is induced to say (20th Century Practice of Medicine, Vol. 16, page 99): "We may reasonably expect benefit in a considerable proportion of cases from the use of means addressed directly to the germ present in the lungs. The practical question to be solved is, what agent will act most powerfully on the specific organism with least inconvenience or danger to the patient? . . . Thus far the most efficient and least harmful drug appears to be the salicylate of sodium, as employed by Liegel. As we have seen 72 consecutive cases, many of them most unpromising, have been treated with it without a death. This is a very remarkable record and certainly recommends the treatment most strongly for further trial. Apart from the experience of Liegel, it does not appear unlikely that a drug which is capable of producing such decided results in acute rheumatism should be effective against an organism so sensitive as the pneumococcus. Liegel did not observe any depressing effect from the salicylate of sodium in the doses he employed (8 grams daily), but such if apprehended could be guarded against by the use of strychnin, etc.

CREASOTE.

Creasote has been found useful by several observers and deserves further trial. It may be given by the mouth or rectum or employed by inhalation. The dose by the mouth is 10 to 15 minims every two or three hours, largely diluted; by the rectum, 25 to 40 minims in a clyster. By inhalation it is useful only as an adjunct." A. H. Kerr¹ says: "I do not say that creasote is a specific for pneumonia, but I do say, with emphasis, that it is the nearest approach to one that has yet been reached." Beverly Robinson² strongly insists on the value of creasote inhalations from the very beginning of an attack of pneumonia, not only for their beneficial effects on the patient, but as having a tendency to lessen the danger of infection to the attendant. He says: "If we may attach faith to the experimental researches of Welch . . . the *Micrococcus lanceolatus* the admitted cause of croupous pneumonia, is a pathogenic organism, one of those least tenacious of life and . . . its loss of virulence is frequent and apt to occur rapidly. Is there not in this important fact a very substantial reason why we should endeavor to employ antiseptic inhalations early in the treatment of pneumonia, before lung consolidation has taken place, and while we may yet legitimately hope that the antiseptic vapor may reach every portion of the affected pulmonary area?"

SALICYLATES.

Robert Liegel,³ in describing 72 consecutive cases of pneumonia occurring in the miners of Leoben See-graben, all of whom recovered, states that 8 of these had pulmonary emphysema, 6 cardiac disease and a large proportion were alcoholics and that no other medicine than the sodium salicylate was employed, excepting, perhaps, an expectorant containing ipecac if the cough was tight and hacking, and small doses of morphin when the pain was excessive; ice was used to the head when the temperature ran above 103 degrees F. As already stated, 79 per cent. of the alcoholic and all of the emphysematous were fatal in our hospital cases. He claims that the disease was not more than one-half the usual duration, but that crisis did not occur in any case, the temperature gradually declining from the end of the first day until the third or fourth day, when convalescence was established. Microscopic examinations of the sputa showed a constantly diminishing number of diplococci until they were found to have entirely disappeared with the beginning of convalescence. He found that when the medicine was discontinued as soon as the temperature became normal relapses were liable to occur, therefore he recommended that it be continued for two or three days longer. He considers that the salicylates exert a specific effect such as that which they exhibit in rheumatic fever, and he believes that if used in this way they would save nearly all cases. He said that the remedy caused no unpleasant symptom excepting buzzing in the ears. These remedies have not found favor with the attending physicians in the hospital, although guaiacol carbonate was used in 5 per cent. of the cases. Wm. C. Sebring⁴ reports 75 cases treated with two drams of the salicylate of sodium daily with one death, and J. H. Ferguson is recorded by Smith⁵ as having treated 106 cases of pneumonia with sodium salicylate with only 6 deaths, but he gave only 60 grains daily and administered it in combination with the citrate of potassium. Others report similar results almost as favorable from the salicylate of sodium or the salicylate of ammonium. The latter would seem to have some advantages, although it

appears not to be quite as well borne by the stomach.

CARBOLIC ACID AND GUAIACOL.

Carbolic acid has also been recommended in large doses. Arthur Wigglesworth,⁶ speaking of the treatment of scarlet fever, states that he has given as much as 6 grains every 2 hours day and night, and A. H. Smith says that he has given as much as 150 minims of the liquefied acid in 24 hours for several days without unpleasant results.

If creasote and carbolic acid can be used in such quantities there seems to be no reason why guaiacol might not be used much more freely and continuously than I have thought judicious. It possesses the advantages of acting quickly and reducing the temperature and of being readily absorbed by the skin so that it does not need to be given internally. Judging from the quantities of the salicylates, carbolic acid and creasote that have been given with impunity it would appear that about half a dram of guaiacol might be rubbed on the surface every two to four hours, and I can see no objection to instituting this treatment so long as its effects are carefully watched and the temperature is not reduced too low. It usually produces free sweating within half an hour after its application, which would be desirable if not carried too far.

CHLOROFORM.

According to Andrew H. Smith, Baumgartner Wucherer and Thiel employed inhalations of chloroform or ether for the treatment of pneumonia. Clemens⁷ gave inhalations of chloroform to relieve the pain and shortness of breath, belonging to the early stages of pneumonia, as early as 1850, and continued it throughout the remainder of his practice without losing a single case. He stated that it often hastened the crisis and that it lessened the average duration of the disease. Oertel⁸ reported decided benefits from the inhalation of chloroform, which he employed mainly in the advanced stages of the disease, about the fifth or sixth day, when there was extensive hepatization with pleuritis which rendered the breathing irregular, frequent and superficial and when the expectoration was scanty and viscid and there were coarse râles over a large area of the lungs with rapidly increasing cyanosis. These inhalations were repeated as often as 5 or 6 times a day and pushed to commencing narcosis with most satisfactory results. The respirations became deeper, the pain was relieved, the râles were diminished, expectoration increased, cyanosis became less marked and general betterment ensued. Oertel sums up his experience in the following way: "I consider the inhalation of chloroform when the above indications are present as a means of treatment in pneumonia that would be difficult to replace by any other." However, he did not favor it when the patient suffered much from headaches, vertigo or mental confusion with involvement of both lungs or with general depression. Smith suggests that the penetration of chloroform to all parts of the lung and its diffusion throughout the entire system in these cases renders the exudate in the air cells an unfit medium for the culture of the pneumococcus and thus lessens the production of the toxin. He says, further: "Aside from any action upon the germs the chloroform will aid pain, soothe nervous agitation and promote sleep." He suggests giving it in connection with oxygen by adding one or two drams to the water in the wash bottle, but says that if the abortive action is aimed at it must be given in more concentrated vapor.

HEART STIMULANTS.

In the severe or exceedingly grave cases it becomes

of the greatest importance to support the heart, and with this end in view remedies classified as heart tonics and stimulants are commonly employed. Of these there is none of more value than *nux vomica* or its derivatives. When we have a preparation on which we can rely, I believe that we get more satisfactory results from the tincture of *nux vomica* or the fluid extract than we do from strychnin or any of the other derivatives of this drug, but unfortunately these preparations vary much in strength; they should be given in small but steadily increasing doses and frequently repeated until we obtain their physiologic effects on the heart and respiratory centers. The tincture of *nux vomica* may be given in doses of from 10 to 20 or even 30 minims every 2 to 4 hours, in severe or very grave cases, or strychnin may be given in doses of from 1/60 to 1/40, 1/30, or even 1/20 of a grain under similar conditions. These were given in 84 per cent. of these hospital cases. There is no danger so long as the patient is watched and the dose diminished with the development of its toxic symptoms. It should be remembered, however, that in young children convulsions frequently occur in pneumonia, and therefore with these the remedy should be used more carefully, not only for its effect on the patient, but also that the friends may not attribute a convulsion to the medicine. Digitalis and other so-called heart tonics have also been highly recommended in this condition, but they have appeared to me of little or no benefit, indeed, in acute inflammatory affections of the myocardium or in the acute weakening of the heart resulting from any of the infectious diseases or septic conditions, I have yet to see a single case in which digitalis or its congeners appeared to me to be beneficial; on the contrary, it has seemed to me that they often do actual harm. I am aware that this is not in accord with the belief of the majority of the profession, and that many authorities have the greatest confidence in this drug; for example, Petresco highly extols enormous doses of digitalis, giving from 75 to 150 grains of the powdered leaves daily, and he reports that out of many hundred cases among soldiers he has had a death rate of only 1.2 to 2 per cent. with the crisis commonly occurring on the third day. Other authors report favorable results from large doses, but still others who have experimented with it have felt compelled to abandon its use on account of its toxic effects. Usually, however, the remedy is not employed in these heroic doses, but rather in the quantities that we would use in severe cases of chronic cardiac disease. Remedies of this class were used in 33 per cent. of our cases.

SALT.

When the secretions are checked and the skin hard and dry, with the tongue dry and brown, the pulse weak and rapid and the respiration shallow and quick and subsultus indicates depression, great benefit may sometimes be obtained from the administration by hypodermoclysis or high rectal enemas of half a pint to a pint of decinormal salt solution; or better, the normal salt solution to which has been added a small quantity of a calcium salt. Ringer's solution may be employed for the purpose. It consists of a 1 per cent. solution of calcium chlorid 3 parts, a 1 per cent. solution of potassium chlorid 4 parts, a 1 per cent. solution of sodium chlorid 70 parts and distilled water 23 parts. Prof. Jacques Loeb's experiments have shown that the turtle's heart may be made to beat for hours or days in a solution of chlorid of sodium, but that no solution other than the sodium salts or of sugar can be substituted without stopping the pulsations. His and other

experiments have also shown that the turtle's heart which has ceased to beat after a few hours' immersion in a normal salt solution may be speedily revived by the addition of a small amount of the salts of calcium or of some of the other bivalent metals, such as strontium, and may then go on beating for 20 to 24 hours. This would indicate that a very small quantity of the calcium salt should always be added to the normal salt solution in order to obtain its best results. Loeb recommends especially 1 per cent. of a saturated solution of the sulphate of calcium with 99 per cent. of the normal salt solution. The chlorid of calcium may, however, be used instead of the sulphate in the proportion of one part of a 2 per cent. solution to 99 parts of the normal salt solution, which would equal nearly half a grain to the ounce. He urges, however, that it is best to use the sulphate of calcium, which is only sparingly soluble in water and which may therefore be used without possible error. Too much of the calcium is quite as deleterious as too little. The effect of administration of the salt solution is often shown in a short time by change in the condition of the tongue, by the increased excretion of urine and by general betterment of the patient's condition.

ALCOHOLIC STIMULANTS.

Not a few physicians begin the use of alcoholic stimulants early and continue them in large quantities throughout the course of the disease, but this practice has never seemed to me judicious, though I confess that their patients not infrequently recover in spite of the treatment. In severe or very grave cases, with the pulse above 135 and the respiration above 45, with symptoms and signs indicative of the beginning of pulmonary edema, free stimulation is often followed by most gratifying results. The dose of alcohol that should be used can not be definitely stated, but it must be graduated for each individual patient according to its effect on the heart and respiration. If, under its influence, the heart's action grows stronger and the respirations less frequent, and if the patient's general condition appears to be improved, and if he is enabled to sleep, we may continue its use and gradually increase its quantity according to its effect. From 16 to 24, or even 36, ounces of good whisky in 24 hours is not excessive in many of these cases, but when this quantity becomes unnecessary the patient will begin to experience head symptoms, and then it should be diminished. I have seen the most gratifying results follow its use in many very grave cases by sustaining the patient for 12 to 24 hours during the most critical stage of the disease, and I have seen some patients where it had to be employed in large doses for three or four days. Whenever a patient has been previously addicted to the use of alcoholic stimulants, it is generally recognized that they should be given early and continued freely. Alcoholic stimulants were employed in 57 per cent. of these hospital cases, though seldom in large quantity.

DYSPNEA.

When dyspnea becomes marked and the lividity of the nails shows that the blood is imperfectly aerated, the same remedies are indicated that were recommended for heart failure, but the chief among these are *nux vomica* or its derivatives and alcoholic stimulants. The most logical remedy for this particular symptom is oxygen, which will sometimes carry the patient through the critical period and save life, but usually its effects are not very apparent, for the reason that it is not given until too late, or that it is not given in sufficient quantity. In order to obtain the best results from this agent it

should be given early and frequently or continuously and in as large quantity as may appear to be beneficial to the patient; but it is not well to annoy patients by forcing it on them. The inhalation can usually be administered without annoyance by placing the funnel within a short distance of the patient's mouth, though if it does not worry the patient the inhaler should be applied closely. It is desirable to begin the use of this agent as soon as dyspnea is distinct. There is no danger in giving it continuously if it appears to be benefiting the patient, though it is generally administered for only 5 or 10 minutes at a time every half hour or hour, or less frequently, according to the amount of dyspnea and the lividity that is apparent. Loeb says the most important factor in the pulsations of the heart is the presence of oxygen, as illustrated by the fact that the pulsations of a turtle's heart in a salt solution may be prolonged for several days by passing a current of oxygen through the solution.

SERUM TREATMENT.

The experiments of G. and F. Klemperer on the curative effects of the blood serum of immune animals are extremely interesting and have shown that other animals may thus be rendered immune to the effects of the *Diplococcus lanceolatus*; but the use of this serum on human beings has not been followed by uniformly favorable results; indeed, in the majority of cases it has appeared to be innocuous, although many cases all told have been reported in which patients have done well while it was being administered. In estimating its value the natural history and tendency of the disease must always be taken into consideration, and the fact that a crisis occurs within a few hours after the administration of a dose of the antipneumotoxin can not be considered as positive proof that the remedy had any effect in producing the crisis. It is only when such results have been obtained quite uniformly under a large number of experiments that certainty can be acquired. Several attempts have been made to test the value of this treatment in the hospital, but for various reasons the trials have not been extensive. So far as any deductions can be drawn, the results have been negative.

CONVALESCENCE.

During convalescence from pneumonia the patient should be careful to avoid all undue exposure or exertion, for it is a recognized fact that there is considerable danger of recurrence within six months. The weakness of the heart also is likely to demand moderation in exercise and the local condition of the lung as well as the patient's general condition requires the avoidance of exposure. In those cases where the consolidation does not speedily resolve I believe that the progress can be stimulated by the administration of the chlorid of calcium, the iodid of ammonium and possibly by alkaline diuretics such as the acetate of potassium. Such patients usually need also bitter and sometimes ferruginous tonics, and unless convalescence is established within 6 or 8 weeks it is desirable that they be sent to a dry climate at a moderately high elevation, though in this the condition of the heart should always be considered. Late in the disease counter-irritation is sometimes recommended, but it is of doubtful utility.

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DISCUSSION.

DR. J. R. BARNETT, Neenah, Wis.—I was disappointed that the Doctor did not allude to puncture of the lung—in cases of delayed resolution in pneumonitis. A short time ago a physician of Chicago reported the results of puncture in such cases. I regret that I can not give his name, and accord due credit to the first published report of what I regard as a most valuable procedure.

Something like eight years ago, in mistaking delayed resolution for a pleurisy, I aspirated the pleural cavity but, of course, found no fluid. I then carried the needle into the lung, which resulted in the clearing up of the exudation and a rapid recovery. A year ago a similar condition presented in a child of 5 or 6. At the end of six weeks there was skin fever, and the dulness—almost flatness—occupied nearly the entire lung. The other also was a little involved. In this case, as in the others, the apex of the heart was displaced. Aspiration showed no pleural fluid and the lung was punctured deeply in two places, in the seventh and eighth interspaces. Recovery was prompt and complete. A few weeks ago I made use of this procedure in the case of a woman. The lung had remained solid for one month, with a continuous temperature, and her condition was so grave that recovery was thought to be impossible. About two ounces of blood escaped through the canula. She is rapidly improving. I have used salicylate of ammonium in pneumonia with the greatest satisfaction during the past twelve years. Up to the stage of commencing resolution I think it can be used with much benefit. We in the country have no such mortality percentage as the hospitals report. Personal conditions and environment are better.

DR. H. A. WEST, Galveston, Tex.—I wish to make a few remarks with regard to the use of the coal-tar antipyretics in pneumonitis such as we see in Texas. During the past winter I watched a type of pneumonia that was prevalent in different portions of the state of Texas which was attended with great mortality. I have seen doses of seven grains of phenacetin, given for the reduction of temperature, produce serious collapse. In all diseases like pneumonia where the tendency to death is from cardiac depression, the coal-tar antipyretics or any other depressant agents are, in my opinion, absolutely contraindicated. It is not contended—so far as I know—that remedies of this coal-tar series produce any other than a mere palliative effect. They neither shorten the duration of the disease or obviate a fatal result, but, on the contrary, may directly contribute to that end. Hence my absolute and unqualified protest against the use of these remedies in pneumonia.

DR. WILLIAM OSLER, Baltimore—I did not propose to enter into the discussion of the treatment of pneumonia—the session is too short—but I rise to make an appeal. We have had presented a statement which should impress all of us as appalling. When we think that other infectious diseases we treat have had their mortality reduced some 10 or 15 per cent. it is terrible to realize that we, as physicians, must listen with mute impassive faces to the announcement of a 36 per cent. mortality in pneumonia. It is an old story, one to which we have been listening to for years and years. You will find that in private practice, in hospitals, in jails, in barracks, in the field and in the camp, the mortality has been always about 25 per cent. What I feel deeply is that something should be done, in a systematic and energetic way, to study this problem of pneumonia and to see if we can not reduce this death rate of 36 per cent.! Gentlemen, this mortality is dreadful, and if it occurred in typhoid fever it would be considered appalling. This record—by no means an uncommon one—should stir us up to do something energetic. I should like to ask the hospital physicians to pay more attention to the specific study of these cases, to study carefully the methods of treatment, and to see if we can not devise some way to reduce this high mortality. We do not give enough attention to the study of pneumonia; many look at it in a helpless sort of way; our best knowledge

should come from general practitioners who study the disease in an intelligent and proper manner. I am sorry Dr. Ingals did not tell us of the mortality on the homeopathic side of the Cook County Hospital—whether it was lower than the mortality on the side of the regular practitioners. Homeopathy taught us a good lesson in the treatment of pneumonia; it led to the abandonment of bleeding, sweating, the use of tartar emetic and other depressing agents.

DR. WILLIAM BAILEY, Louisville, Ky.—I regard the paper an able and efficient one. As a general practitioner for more than forty years and as one who believes this to be a self-limited disease, I am convinced that much can be done for the benefit of the patient the subject of pneumonia and, in the early stages, much can be done to limit the disease. I do not agree with Dr. West that it is unsafe to reduce the temperature with some of the coal-tar derivatives. During the first day or two of the disease I do not think that I make a mistake in using some of them for this purpose. The use of phenacetin, with quinin, supported by citrate of caffein, reduces the temperature safely, promotes comfort and limits the amount of tissue involved. I am sure that much can be done for the comfort of the patient in this way. I also believe that some form of opium can be given with advantage; small doses of Dover's powder will lessen the cough and relieve the distress of the patient, as will codein or heroin. The personal equation and the powers of resistance of our patients should be always considered. Death in pneumonia is by asthenia and so the heart of the patient should be supported by the use of strychnin and digitalis. If there is much tissue involved and death is threatened by apnea then oxygen will sometimes save lives.

DR. E. F. WELLS, Chicago—In making a statistical inquiry into the mortality of pneumonia, in connection with a paper which I to-day presented to another Section of this Association, it appears that, among a very large number of cases, extending over a long period of time, the death-rate has remained practically the same, no matter where it occurred, or how treated. It is, therefore, my opinion that the death rate is now no greater, no less, than formerly. I wish to call attention to one point in the symptomatology of pneumonia; it begins with extreme suddenness, and changes for the worse or for the better occur suddenly. If then, with our present knowledge and resources, we desire to reduce our mortality in pneumonia, we must be prepared to meet promptly these unexpected and dangerous emergencies as they arise. In this connection I wish to make a plea for a more careful and constant attention to these cases, for I am satisfied that I have, in some cases, seen lives saved by the physician being in constant attendance on them.

DR. JAMES J. WALSH, New York—I have just taken part in the discussion on the prevalence and fatality of pneumonia in the Section on Hygiene and Sanitary Science. From the communications made there and the present discussion there can be no doubt that while the disease is increasing in frequency the percentage of mortality from it is at least as great as it was 75 years ago when statistics on the subject were first collected. The question of prevention becomes an extremely important one, then, and precautions that would seem to be exaggerated will have to be considered to prevent the spread of the disease. The sputum of pneumonia patients probably contains infectious elements and will have to be taken care of as conscientiously as tuberculous sputum. Twenty-five years ago the suggestion that tuberculous sputum carried infection would have been laughed at. It seems not unlikely that a similar change of opinion will take place with regard to the sputa of pneumonia patients. The denser the population the greater the frequency of pneumonia and also the higher percentage of mortality. Life in crowded centers is becoming more common and the pneumonia problem is constantly becoming more serious. The question of dust and its dangers, especially in such places as churches, theaters, railway stations, etc., will have to be taken under consideration by city boards of health if the prophylaxis of pneumonia is to be seriously attempted.

DR. R. M. CUNNINGHAM, Ensley, Ala.—I can not allow the

present opportunity to pass without adding a few remarks to the discussion of this subject. During the last twenty years I have observed in the prisons of Alabama more than 600 cases of croupous pneumonia. These cases occurred mostly in epidemics, from 20 to 90 odd cases in each. Most of these cases were in the prisons where convicts work, in coal mines, but there were as many cases in proportion among those at these prisons who were employed on the outside as among those who were employed on the inside of the mines. Hence, if there was any special causative factor at work, it was in the prison and not in the mines. Nearly all these were negroes; there was a much smaller percentage of the white convicts attacked. The hygienic conditions of these persons were good. The epidemics would come and go without apparent cause or reason, the hygienic conditions, clothing, food, work, etc., remaining the same. Some of the worst of these epidemics have been in the late spring and summer, the worst, so far as mortality is concerned, being in July and August. Sporadic cases have been rare. A singular feature has been the large number of the able-bodied men attacked. Another feature was—in some of the epidemics—the small number of cases among the convicts who worked in the mines at night, but who slept in the prisons in the daytime. The mortality rate has varied from 10 to 60 per cent. The average for the 20 years has been about 30 per cent. The difference in the mortality has been due to the type of the disease, notably in the severity of the toxemia, the extent of the pulmonary area involved, and the tendency to complications—meningitis, pericarditis, etc. Considering that these cases occurred in negro convicts, subject to the environment of prison life, the severity of the cases, the large area of lung tissue involved, etc., I think the death rate is fair. I am persuaded, therefore, that there is something in the treatment of croupous pneumonia. There is no specific, no universal treatment. Each case, modified by the type of the epidemic, is a law unto itself. The range of this treatment is from the most pronounced antiphlogistic to the most thorough stimulant, each case determining what is best. The best antipyretic is the cold bath; the next, 20 to 30 grains of quinin. The tar derivatives have no place in the treatment of the disease. I am sure they were the cause of death in several cases where they were employed. They reduce temperature promptly, but at the expense of a cardiac power. Strychnin, whisky and digitalis, in the order named, are the best stimulants—the one to be selected most adapted to the particular case. Hypodermoclysis of normal salt solution I have seen save life. This is the chief reliance in those cases ushered in with profound shock. Salt solution also, in a great measure, prevents heart clots. I am of the opinion that these thrombi are often antemortem, and often the immediate cause of death. To prevent them is one of the objects of treatment. I am of the opinion that our best means to do this is salt solution. We should never give up a case of croupous pneumonia until the death of the patient. The most remarkable results sometimes follow the right treatment at the right time.

DR. F. D. REESE, Cortland, N. Y.—In the treatment of pneumonia there are three objects to be attained: to open the bowels, the kidneys and the skin. I give calomel to open the bowels, acetic acid and carbonate of ammonia to open the skin and reduce the temperature, and acetate of potassium to open the kidneys. The heart should be supported with an appropriate stimulant. I also order the cotton jacket. Of my last ten cases all have recovered under this treatment except one.

Another "Singular Coincidence" Among Dentists.—In looking over the last issue of the *Dental Review*, says the *Dental Digest*, we notice the president's address, delivered before the Indiana State Dental Association, in June of this year, by Dr. C. E. Pittman. The address is two pages long, and one page of it is identical in wording with the president's address delivered before the Illinois State Dental Society, by Dr. J. G. Reid, in May, 1901, and printed in the *Digest* for July, 1901. Great minds move in the same channel.

THE PRESENT ASPECT OF THE TUBERCULOSIS PROBLEM IN THE UNITED STATES.*

S. A. KNOFF, M.D.
NEW YORK CITY.

Five years ago, on the fiftieth anniversary of our beloved Association, it was my privilege to read before this Section a paper with the title "The Present Status of Preventive Means Against the Spread of Tuberculosis in the Various States of the Union Critically Reviewed." To-day I shall endeavor to present to you as precise a report as possible of what has been done by the same states during the past years, and give you a bird's-eye view of the present aspect of the tuberculosis problem in the United States. I am indebted for my information to the courtesy of the presidents and secretaries of the state boards of health and a number of health officers of cities.

REPORTS FROM THE VARIOUS STATES.

The following are the questions which were sent out, and to which 48 state boards, 2 territorial and 25 city boards of health have replied:

1. What laws or regulations exist in your state (city) to combat the spread of tuberculosis (pulmonary or other)?
2. What recommendations, ordinances, circulars, public notices, etc., has your honorable board issued with the same purpose in view?
3. What sanatoria, special hospitals and dispensaries for the exclusive treatment of tuberculosis, private or public, for adults or children, exist in your state (city)?
4. Has your state or any city in your state a society for the prevention of tuberculosis?
5. What measures, laws or regulations exist in your state (city) to combat bovine tuberculosis?

ALABAMA: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by W. H. Sanders, M.D., State Health Officer.

ARIZONA: No board of health; no laws or regulations concerning tuberculosis in man; no circulars, etc.; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis. Most stringent and rigid laws concerning tuberculosis in cattle exist and are well enforced. Reported by Wm. Duffield, M.D., Health Officer.

ARKANSAS: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals, or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by R. B. Christian, M.D., Secretary State Board of Health.

CALIFORNIA: No laws or regulations concerning tuberculosis in man; no recommendations, except those appertaining to general contagious diseases. One private institution, "Idylwild Sanatorium," in Southern California, Dr. Walter Lindley, Los Angeles, Director. No society for the prevention of tuberculosis. Some local ordinances requiring dairy cows to be submitted to the tuberculin test. Reported by W. P. Matthews, M.D., Secretary State Board of Health.

COLORADO: No laws or regulations concerning tuberculosis in man, except anti-spitting ordinances. A good circular to combat the propagation of tuberculosis in man is issued. There exist the "Protestant Episcopal Home" for pay patients only; "The National Jewish Consumptives' Hospital," under the control of the "Bnai-Brith," a national Jewish benevolent society; this institution cares only for charity patients; the "Glockner Sanatorium," at Colorado Springs, in charge of the Sisters of Charity, for pay patients; another sanatorium is projected under the direction of Dr. S. E. Solly; "The Rocky Mountain Sanatorium," in course of construction, for pay and charity patients, in charge of Dr. A. M. Holmes. There is a

Society for the Study and Control of Tuberculosis; president, Dr. Wm. P. Munn; secretary, Dr. G. E. Tyler. No special bovine laws; local boards of health have the authority to order the destruction of any animal that is affected with the disease. Reported by G. E. Tyler, M.D., Secretary State Board of Health.

CONNECTICUT: No laws or regulations concerning tuberculosis in man. A good circular is issued for public information, entitled "Consumption, Its Cause and Means of Prevention." No sanatoria, special hospitals or special dispensaries at present, but \$25,000 were appropriated to the Hartford Hospital to establish and conduct an experimental hospital for consumption. No society for the prevention of tuberculosis. There have been some laws to combat bovine tuberculosis, but they have been repealed. Reported by Prof. C. A. Lindsley, M.D., Secretary State Board of Health.

DELAWARE: No answer has been received. Through the courtesy of Dr. W. A. Evans, Chicago, I learned that there are enactments bearing on the subject of tuberculin; no further details were furnished.

DISTRICT OF COLUMBIA: It is unlawful to expectorate in public vehicles or in buildings under control of government. Physicians reporting deaths from tuberculosis are notified to have the premises disinfected. A circular of information has been prepared for physicians of the poor, dispensaries, etc. No sanatorium, special hospital or special dispensary; no society for the prevention of tuberculosis; no bovine laws. Reported by Wm. C. Woodward, M.D., Health Officer.

FLORIDA: No laws, except that some cities have anti-spitting ordinances. The state board has issued publications containing general advice concerning disinfection and disposition of sputum. A special institution for tuberculous patients was started at Orlando, but has now become a general hospital. No society for the prevention of tuberculosis; no bovine laws. Reported by Joseph Y. Porter, M.D., State Health Officer.

GEORGIA: No answer has been received. Through the courtesy of Dr. W. A. Evans, Chicago, I learned that there are no laws relating to tuberculosis in man or beast.

HAWAII: The Territorial Board of Health has no laws regarding tuberculosis in man, but has issued anti-spitting regulations and some good instructive leaflets for consumptives. Physicians are required to report cases of all forms of tuberculosis. No sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis. There are no bovine laws, but some bovine regulations. Reported by J. S. B. Pratt, M.D., executive officer.

IDAHO: No state board of health. Dr. E. L. Nourse, Secretary of the State Board of Medical Examiners, reports that there are no laws concerning the question of tuberculosis or other infectious diseases, except such as each town may individually make for its own protection. Tuberculosis is rare, consequently there are no institutions for the treatment and no societies for the prevention of the disease.

ILLINOIS: No laws or regulations concerning tuberculosis in man. No ordinances or circulars. Chicago Sanatorium for Tuberculosis, Dr. J. A. Robison, Director; Cook County Hospital; Illinois Society for the Prevention of Tuberculosis, president, John McLaren; secretary, Dr. J. A. Robison. Bovine laws formerly enacted and executed by the Live Stock Commissioners are no longer enforced for lack of appropriation. Reported by J. A. Egan, M.D., Secretary State Board of Health.

INDIANA: No laws or regulations concerning tuberculosis in man. Physicians are requested to report cases so that health boards may send circulars containing excellent instructions for the prevention of tuberculosis. One private institution in Indianapolis and another in New Albany. No society for the prevention of tuberculosis as yet, but there is agitation for its formation. No bovine laws. Reported by J. N. Hurty, M.D., Secretary State Board of Health.

INDIAN TERRITORY: The secretaries of the Cherokee National Board of Health and of that of the Choctaw Nation replied negatively to all questions.

IOWA: No laws or regulations concerning tuberculosis in man. Circulars and a bulletin are issued instructing the people in the methods of the prevention of tuberculosis. A private sanatorium is in operation at Fort Dodge under the direction

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. Arthur R. Reynolds, George Cook and Heman Spalding.

of Dr. J. W. Kime. No society for the prevention of tuberculosis; no bovine laws. Reported by J. F. Kennedy, M.D., Secretary State Board of Health.

KANSAS: No laws or regulations concerning tuberculosis in man. Reporting for the purpose of disinfecting premises at frequent intervals and after the disease has run its course has been recommended to the board of health. No sanatorium, special hospital, or special dispensary; no association for the prevention of tuberculosis. No specific bovine laws, but the sale of diseased animals is punishable by fine or imprisonment. Reported by W. B. Swan, M.D., Secretary State Board of Health.

KENTUCKY: No specific laws or regulations, but claims wide authority of general sanitary laws. A good circular is issued on the prevention of consumption. No sanatorium, special hospital or special dispensary; no society for the prevention of tuberculosis; no specific bovine laws, only those appertaining to the spread of contagious diseases in animals. Reported by J. M. McCormack, M.D., Secretary State Board of Health.

LOUISIANA: No laws or regulations concerning tuberculosis in man. The only circular issued appertains to the gathering of statistics. One private sanatorium directed by Dr. G. R. Tolsen, at Covington. Committee appointed to urge the advisability of establishing a state sanatorium. No society for the prevention of tuberculosis. No compulsory bovine laws, but tuberculin test is offered gratuitously by New Orleans City Board of Health. Reported by G. Farrer Patton, M.D., Secretary State Board of Health.

MAINE: The law makes it a duty of householders and attending physicians to report cases of pulmonary tuberculosis to the local boards of health; the latter in turn must report to the state board. Disinfecting of premises is recommended to householders who own their own homes; compulsory if the death occurs in a rented house or apartment. Excellent circulars for the prevention of consumption and for the disinfection of rooms and things used by consumptives are issued and widely distributed. *The Sanitary Inspector*, a journal devoted to personal and public hygiene, has issued 9,000 copies of an admirable special tuberculosis number; it is edited by Dr. A. G. Young. No sanatoria, special hospitals, or special dispensaries. There is a Maine State Sanatorium Association, of which the governor is president and Dr. A. G. Young secretary. There are good bovine laws which become most effective through the combined action of local boards of health and cattle commissioners. Reported by A. G. Young, M.D., Secretary State Board of Health.

MARYLAND: No special laws, but a bill is pending to create a tuberculosis commission. Many pamphlets and instructive circulars are issued. The Maryland Hospital for Consumptives; the Laennec Society for the Prevention and Study of Tuberculosis of Johns Hopkins. The Maryland Public Health Association has devoted much attention to tuberculosis. State Live Stock Sanitary Board has control of dairies. State Board of Health confiscates and destroys tuberculous animals at abattoirs and stock yards. Reported by John S. Fulton, M.D., Secretary State Board of Health.

MASSACHUSETTS: No special laws relating to tuberculosis. Excellent circulars on the prevention of tuberculosis are widely circulated. Bacteriologic examination of sputum is made gratuitously. State Sanatorium at Rutland; Cullis Home for Consumptives, Boston; Free Home for Consumptives, Boston; Sharon Sanatorium, Sharon; private sanatorium of Dr. Millett, Brockton. No society for the prevention of tuberculosis. Cattle commission has control of bovine laws, acting under the Board of Agriculture. Reported by Samuel W. Abbott, M.D., Secretary State Board of Health.

According to the *Medical News*, of Dec. 7, 1901, there exists near Plymouth an open-air colony for consumptives. There the patients live in shacks about 12 feet square, of which three sides are constructed of wood and the fourth side consists of a screen which is pulled down only in rainy weather; perfect ventilation being thus insured. In the main building there are arrangements for sunbaths and hydrotherapeutic applications.

TEMPERATURE: The laws are not specific. On recommendation of Dr. R. M. officials tuberculosis has been included in the "dangerous to public health." Most excellent

educational propaganda through recommendations, circulars, and "Teachers' Sanitary Bulletin" have been made; 20,000 school teachers have been supplied with the latter. There are no special hospitals, sanatoria or special dispensaries; no society for the prevention of tuberculosis. No bovine laws providing for systematic inspection. If a case of tuberculosis in an animal is reported to the State Live Stock Commission the latter is not legally bound to take action for the protection of the bovine species, but only to restrict the spread of the disease among animals. Reported by Henry B. Baker, M.D., Secretary State Board of Health.

MINNESOTA: No specific laws, but general laws permit tuberculosis to be classified among contagious diseases. No recommendations, ordinances or circulars. A special hospital for tuberculous prisoners. No special dispensaries. State institution isolates consumptives as far as practicable. Legislative committee has been appointed with the object of establishing a state sanatorium. No society for the prevention of tuberculosis. There are good bovine laws. Reported by H. M. Bracken, M.D., Secretary State Board of Health.

MISSISSIPPI: No laws or regulations concerning tuberculosis in man. No special recommendations, ordinances, or circulars. A special hospital for the tuberculous insane at Jackson. No society for the prevention of tuberculosis; no bovine laws. Reported by J. F. Hunter, M.D., Secretary State Board of Health.

MISSOURI: No laws or regulations concerning tuberculosis in man; no special recommendations, circulars, etc.; no sanatoria, special hospitals or special dispensaries. Tuberculosis Medical Society of the City Hospital Alumni of St. Louis. The State Board of Agriculture enforces the bovine laws. Reported by A. W. McAlester, M.D., Secretary State Board of Health.

At the time this report was received no other society existed; recently, however, a Missouri State Society for the Prevention of Tuberculosis has been formed.

MONTANA: No special law regarding tuberculosis, but a general law providing that all infectious and contagious diseases are reported. No recommendations or circulars as yet. The State Board of Health is engaged in finding out the prevalence of the disease. No special hospitals, sanatoria, or special dispensaries. No society for the prevention of tuberculosis. Most excellent bovine laws, including meat and milk inspection law, in operation. Reported by A. F. Longeway, M.D., Secretary State Board of Health, and M. E. Knowles, State Veterinarian.

NEBRASKA: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by B. F. Crommer, M.D., ex-Secretary State Board of Health.

NEVADA: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by S. C. Gibson, President State Board of Health.

NEW HAMPSHIRE: No special laws or regulations. Circulars, papers and addresses on the restriction and prevention of tuberculosis have been widely distributed. A commission for the establishment of a state sanatorium has been created. A "Suncook Association for the Prevention of Tuberculosis." Good bovine laws. Reported by Irving A. Watson, M.D., Secretary State Board of Health.

NEW JERSEY: Numerous local boards have anti-spitting laws. One city requires the reporting of cases of pulmonary tuberculosis. A good circular on "Consumption, Its Communicability and Prevention," has been issued. No sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis. Good bovine laws. Reported by Henry Mitchell, M.D., Secretary State Board of Health.

NEW MEXICO: According to the direct report of Dr. W. G. Hope, the Secretary of the Territorial Board of Health, the only law is one appertaining to contagious diseases. But, according to Mr. Reynolds, secretary of the territory, there is a law in force relating to tuberculosis in human subjects, being

a portion of the school law which requires that all teachers in the public schools furnish a physician's certificate, stating that they are not afflicted with the above-mentioned disease. Circulars of instruction are distributed to tuberculous persons and to those in contact with them. United States Marine Hospital for tuberculous sailors at Fort Stanton, and United States Hospital for tuberculous soldiers at Fort Bayard; St. Joseph Hospital, Silver City. No society for the prevention of tuberculosis; no bovine laws. Reported by W. G. Hope, M.D., Secretary Territorial Board of Health.

NEW YORK: The state as a whole has no legal enactments directed especially toward the spread of tuberculosis. A circular of information has been issued for the adoption by local boards. Beside a number of institutions located in the city of New York, which will be enumerated under the respective column, there are in this state the Adirondack Cottage Sanatorium for consumptives of moderate means; the St. Gabriel's Sanatorium, at Paul Smith's, also for patients of moderate means, with some free beds; the Loomis Sanatorium at Liberty for wealthier patients, with a branch for the poorer classes; the Liberty Sanatorium, a private institution for paying patients only. There has been an appropriation of \$100,000 for a New York State Sanatorium and a place has been selected at Lake Placid for its creation. Another sanatorium is projected for consumptive working girls, by the name of Stony Wolde Sanatorium.

There is as yet no state society for the prevention of tuberculosis. Buffalo has a local association, with Dr. Benjamin G. Long as president, and Dr. Wm. G. Bissell as secretary. A special committee on the prevention of tuberculosis has, however, been formed under the direction of the New York City Charity Organization Society, which has the coöperation of a number of prominent physicians of the city and state. The excellent work which was started by the same society on behalf of tenement-house reform gives rise to the hope that a state commission on tuberculosis may result from this work. The enforcement of good bovine laws is in the hands of the Department of Agriculture of the State of New York, and \$10,000 have been appropriated for that purpose. Reported by Daniel Lewis, M.D., Commissioner of Health, and William Henry Kellye, State Veterinarian.

NORTH CAROLINA: No special legislation, except some local anti-spitting laws. An article on the prevention of tuberculosis is widely circulated, so is a monthly bulletin containing articles on the same subject. Winyah Sanatorium at Asheville. No society for the prevention of tuberculosis; no bovine laws. Reported by Richard H. Lewis, M.D., Secretary State Board of Health.

From an unofficial source and last year's report of Dr. Amblor I learn of the existence of two other private sanatoria in that state, namely the Pigbone Sanatorium, for colored consumptives, and St. Joseph's Retreat.

NORTH DAKOTA: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by H. D. Quarry, M.D., Secretary State Board of Health.

OHIO: Special laws are now before the legislature. A good circular is issued. A bill has been introduced for the appointment of a state tuberculosis commission to report on the feasibility and advisability of establishing sanatoria. The Cincinnati Hospital for Consumption, in charge of Dr. Lyle. Ohio Society for the Prevention of Tuberculosis: president, Hon. J. H. Outhwaite; secretary, Dr. Andrew Dimberman. Good bovine laws. Reported by C. O. Probst, M.D., Secretary State Board of Health.

OKLAHOMA: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by L. Haynes Buxton, M.D., Secretary Territorial Board of Health.

OREGON: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. No state board of health. Reported by J. A. Fulton, M.D., Health Officer.

PENNSYLVANIA: No laws or regulations concerning tuberculosis in man. A cautionary circular for the instruction of the public has been issued. Hospital for Consumptives, Chestnut Hill Hospital, Rush Hospital for Consumptives, all in Philadelphia; Free Hospital for Poor Consumptives; Sunnyrest Sanatorium, White Haven. Pennsylvania Society for the Prevention of Tuberculosis, president, Dr. Howard S. Anders; secretary, Dr. Alexander H. Davisson. Excellent bovine laws. Reported by Benj. Lee, M.D., Secretary State Board of Health.

From an unofficial source I learned that a movement is about to be started in Pennsylvania to collect \$5,000 by public subscription to be expended in the erection and maintenance of suitable shelters on the state forest reservations, where consumptives, indigent or in comfortable circumstances, may go for curative treatment. Recognizing the value of the state's woodlands to the health of the community, Dr. J. T. Rothrock, Commissioner of Forestry, took a consumptive family from the city of Philadelphia and placed them in the mountain air of Monroe County, near Resica, where the elevation is about 1,200 feet. The excellent results obtained with this single family have given rise to the desire to try the experiment on a larger scale.

RHODE ISLAND: No special state legislation, but local anti-spitting laws in Providence, Pawtucket and Woonsocket. No circulars distributed, except those sent out with the bottles which are intended for the collection of sputum, and those circulars which are sent out with a positive report. An appropriation of \$1,500 is made annually available for examination of sputum for physicians. No sanatorium, special hospitals, or special dispensaries. Bill before legislature asking for an appropriation of \$100,000 for the erection of a state sanatorium is in the hands of a judiciary committee. No society for the prevention of tuberculosis. Bovine law defective; it permits the farmer to utilize his animals for milk production until they are in the last stages of the disease, and, failing to give milk, are of no value to the farmer; he then sells the diseased carcass to the state, for which he gets half of the appraised value. Reported by Gardner T. Swarts, M.D., Secretary State Board of Health.

SOUTH CAROLINA: No special legislation; some cities have anti-spitting laws. Good circular has been issued. No sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. The combat of bovine tuberculosis is in the hands of the Clemson Agricultural and Industrial College. Reported by James Evans, M.D., Secretary State Board of Health.

SOUTH DAKOTA: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatorium, special hospital or special dispensary; no society for the prevention of tuberculosis; no special bovine laws. Tuberculosis comes under the head of contagious diseases, as does glanders, etc. Reported by Wm. Edwards, M.D., Superintendent Board of Health, and J. P. Foster, State Veterinarian.

TENNESSEE: No special legislation; the power of the health board is simply advisory. The latter has, however, urged additional legislation in regard to tuberculosis. No recommendations, circulars, etc.; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis. The following resolution of the board of health concerning tuberculosis in animals has been widely distributed:

Resolved, That this Board hereby gives notice that all persons are prohibited from selling milk, or other dairy products intended for human food, from cattle infected with either tuberculosis, anthrax (charbon) or glanders.

All persons are prohibited from skinning, selling, or otherwise making use of any part of any animal dead from anthrax (charbon) or glanders, and from throwing such dead animal into any pond, lake or running stream.

Reported by J. A. Albright, M.D., Secretary State Board of Health

TEXAS: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by Geo. R. Tabor, Secretary State Board of Health.

From an unofficial source we learn of the excellent work the agricultural colony of tuberculous prisoners of the state of

Texas has accomplished. A large number of the prisoners have been cured and an equally large number very much improved. During the first year \$25,000 remained as net earnings of this philanthropic enterprise. Last year Dr. Ambler reported the existence of Dr. L. W. Cook's Sanatorium at Boerne.

UTAH: No special laws against the spread of tuberculosis from man to man. The board of health issues a revised statute relating to the public health, however, only with reference to bovine tuberculosis. No sanatoria, special hospitals or special dispensaries. Reported by T. B. Beatty, M.D., Secretary State Board of Health.

VERMONT: No special laws concerning tuberculosis in man. An excellent circular for information is issued. No sanatorium, special hospital or special dispensary; no society for the prevention of tuberculosis. No definite information concerning bovine tuberculosis could be procured, but I learned indirectly that the state kills tuberculous cattle and recompenses the owner. Reported by H. D. Holton, M.D.

VIRGINIA: No special laws; an excellent circular on the restriction and prevention of consumption is issued; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by Paulus A. Irwin, M.D., Secretary State Board of Health.

WASHINGTON: Every case of tuberculosis must be reported, just as any contagious disease. A good circular is issued, remarkable for its plain language concerning unsanitary ladies' dress. No sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis. Reported by D. C. Newman, M.D., Secretary State Board of Health. Concerning bovine laws no information has been received.

WEST VIRGINIA: No answer has been received.

WISCONSIN: No specific laws. Good, brief circular, small so as to be enclosed in letters. No sanatoria, special hospitals or special dispensaries, but a bill to provide a state sanatorium is before the legislature. Efforts are being made to form a society for the prevention of tuberculosis. Most excellent bovine laws. The Live Stock Sanitary Board has full power to do everything toward the eradication of bovine tuberculosis. Reported by U. O. B. Wingate, M.D., Secretary State Board of Health.

WYOMING: No laws or regulations concerning tuberculosis in man; no ordinances or circulars; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; most excellent bovine laws. Reported by Amos W. Baker, M.D., Secretary State Board of Health.

REPORTS FROM VARIOUS CITIES.

From the city boards of health of the 43 largest cities in the Union I received only the following 25 replies:

New York: Section 153 of the Code of New York reads as follows:

That pulmonary tuberculosis is hereby declared to be an infectious and communicable disease, dangerous to the public health. It shall be the duty of every physician in this city to report to the Sanitary Bureau, in writing, the name, age, sex, occupation and address of every person having such disease who has been attended by or who has come under the observation of such physician for the first time, within one week of such time. It shall also be the duty of the commissioners or managers, or the principal superintendent or physician of each and every public and private institution or dispensary in this city to report to the Sanitary Bureau, in writing, or to cause such report to be made by some proper and competent person, the name, age, sex, occupation and last address of every person afflicted with this disease who is in their care or who has come under their observation within one week of such time. It shall be the duty of every person sick with the disease and of every person in attendance upon anyone sick with this disease, and of the authorities of public and private institutions or dispensaries, to observe and enforce all the sanitary rules and regulations of the Board of Health for preventing the spread of pulmonary tuberculosis.

While physicians are requested to report their private as well as hospital cases, no inspector visits the premises of the patient unless the attending physician makes the request. The law referring to the spitting nuisance is announced by placarding the following in elevated and surface cars:

Spitting on the floor is a misdemeanor; \$500 fine or imprisonment for one year, or both, may be the punishment therefor. By order of the Board of Health. Section 194, Sanitary Code; Section 15, Penal Code.

The cards for reporting private cases read as follows:

REPORT OF CASE OF TUBERCULOSIS.

New York, ... 190..
 Name of patient, ... Age Sex
 Occupation Residence
 Previous cases in family, and relation to patient
 Do you wish an inspector to visit the premises and instruct the family regarding prophylaxis? Answer yes or no
 M.D.
 Residence

NOTE.—Cases of tuberculosis will NOT be visited by an inspector from the Department of Health except on the request of the attending physician.

Bacteriologic examination is made free of charge. An excellent circular, entitled "Information for Consumptives and Those Living with Them," has been issued in English, German, Italian and Hebrew and largely distributed. There is no society for the prevention of tuberculosis, but a special committee for the prevention of tuberculosis has been recently formed under the direction of the New York Charity Organization Society with a view of creating a permanent tuberculosis commission, similar to the Tenement-House Commission. Section 135 of the Sanitary Code of New York, referring to diseased animals, reads as follows:

That no diseased or sickly cattle, swine or sheep, nor any horse, dog or cat which is suffering from or has been exposed to any disease which is contagious among such animals, shall be brought into or held or kept in the City of New York. All persons, corporations or companies bringing milk cows into the City of New York shall furnish a certificate signed by a veterinarian who is a graduate of a recognized veterinarian college, with the date of graduation and the name of college from which the degree was received, to the effect that said cows are free from tuberculosis as far as may be determined by physical examination and the tuberculin test. Said certificate shall give a number which has been permanently attached to each cow, and a description sufficiently accurate for identification stating the date (which must be not more than sixty days prior to the time they are brought into the city), the place of examination, the temperature of the cow or cows at intervals of three hours, for twelve hours before the subcutaneous injection of the tuberculin, the preparation of the tuberculin used, the location of the injection, the quantity injected, the temperature at the tenth hour after the injection of the tuberculin and every three hours after the aforesaid tenth hour for twelve hours, or until the reaction is completed. No cow with a certificate which states that said cow gave a reaction of two degrees F. after the injection with 5.5 c.c. of the tuberculin prepared by the Department of Health of the City of New York (or its equivalent), diluted with ten times its volume of a 5 per cent. watery solution of carbolic acid, shall be brought into the City of New York.

There is an excellent law protecting the inhabitants of the City of New York against unwholesome, impure and adulterated milk. Reported by Prof. Hermann M. Biggs, M.D., Health Officer.

An additional report concerning the hospital accommodation for the consumptive poor of the City of New York has kindly been sent to me by Hon. Homer Folkes, the Commissioner of Public Charities. The Seaton Hospital receives \$60,000, St. Joseph's Hospital \$50,000, and the Brooklyn Home for Consumptives \$15,000 per year for the care of consumptives, at the per capita rate of 80 cents per day. Through this appropriation the public charities dispose of:

210 beds per year at Seaton Hospital.
 170 beds per year at St. Joseph's Hospital.
 52 beds per year at Brooklyn Home for Consumptives
 432 beds.

In addition to these there are beds set aside for consumptives in the Department of Public Charities:

50 beds at the Kings County Hospital.
 120 beds at the Almshouse.
 295 beds at the Metropolitan Hospital.

465 beds.

That is a total of 897 beds at the disposal of the commissioner for the care of the consumptive poor of the City of New York.

In addition to this report, I beg to state that St. Joseph's Hospital can accommodate 350 patients, Seaton Hospital 250, the Brooklyn Home for Consumptives 75, the Loomis City Sanatorium 20, and the Montefiore Country Sanatorium 150 patients. The Lincoln (formerly colored) Hospital has a special building for consumptives with about 40 beds. The Home of Rest for Consumptives, which up to recently accommodated a number of patients in a special ward at St. Luke's Hospital, has acquired a new property and hopes to accommodate about 30 patients by July 1. The only tuberculosis dispensary which

to my knowledge is exclusively devoted to the treatment of ambulant tuberculous patients is the one connected with the New York Throat and Nose Hospital.

CHICAGO: Anti-spitting law. Circular and postal-card report for physicians reporting deaths from tuberculosis. The county poorhouse has separate pavilions; the Alexian Brothers' Hospital a ward for consumptives. St. Elizabeth's Hospital for 400 consumptive patients is in course of construction. No special city bovine laws. Reported by Arthur R. Reynolds, M.D., Commissioner of Health.

PHILADELPHIA: No special laws. A good circular on the means of preventing the spread of consumption is published. Rush Hospital and Chestnut Hill Hospital. No city society for the prevention of tuberculosis. No city bovine laws or regulations. Reported by J. Howard Taylor, M.D., Medical Inspector.

BOSTON: Section 79 of Chapter 80, of the Public Statutes, reads as follows:

When a physician knows that a person whom he is called to visit is infected with any disease dangerous to the public health, he shall immediately give notice thereof to the board of health of the town; and if he refuses or neglects to give such notice he shall forfeit for each offense not less than fifty nor more than one hundred dollars. The Board of Health considers tuberculosis an infectious disease and requires all cases to be reported. In cases where isolation or care can not be had the patient is removed to a hospital. In case of death or removal of the patient the rooms are promptly fumigated.

Excellent directions for consumptives and those living with them are issued and widely circulated. Bacteriologic examination made free of charge. The following institutions already mentioned under Massachusetts are located in Boston: Carney Hospital (special wards for consumptives); Channing Home (for poor women and children), 17 beds; Cullis Consumptives' Home for the Poor, 44 beds; Free Home for Consumptives; House of the Good Samaritan (for women and children), 28 beds. No society for the prevention of tuberculosis. Excellent regulations concerning bovine tuberculosis and products from diseased cows. Reported by C. E. Davis, Jr., M.D., Secretary Board of Health.

CLEVELAND, OHIO: Anti-spitting law in street cars. Disinfection with formaldehyd gas is enforced after every case of death from tuberculosis. A special hospital for tuberculous patients is planned by the city. There is a city branch of the Ohio State Society for the Prevention of Tuberculosis. No measures against bovine tuberculosis. Reported by Martin Friedrich, M.D., Health Officer.

SAN FRANCISCO: All cases of tuberculosis must be reported. There is an anti-spitting law. The law also requires the fumigation of premises inhabited by the poor where death resulted from tuberculosis. A regulation of the school department rejects applicants for teacher's certificates to those affected with tuberculosis and makes the same cause for dismissal of teacher. No circulars issued. No sanatoria, special hospitals or special dispensaries. No society for the prevention of tuberculosis. Good bovine laws directed against the spread of tuberculosis in cattle and the sale of tuberculous products, milk and meat. Reported by J. G. Emory, Secretary Board of Health.

CINCINNATI: Anti-spitting law. No circulars of information are issued. Has the first municipal tuberculosis hospital in the United States. No society for the prevention of tuberculosis; no bovine laws. Reported by Clark W. Davis, M.D., Health Officer.

PITTSBURG: Anti-spitting law. No circular of information, but gratuitous bacteriologic diagnosis. No sanatoria, special hospitals or special dispensaries. No local society. Strict bovine laws which were confined to the city limits and have driven dairies outside beyond the control of the authorities. Reported by E. G. Matson, Health Officer.

DETROIT: Mr. John F. McKinlay, Secretary of the Board of Health, reported to me in substance as follows: "In compliance with an order issued by the State Board of Health the Detroit Board sought to enforce the order that cases must be reported to the health officer. The board gave encouragement to physicians to report this disease and analyze sputum gratis when requested. Dr. E. L. Shurly refused to report so that the courts might pass on the validity of the order of the state board. Dr. Shurly was fined \$50 and costs. An appeal was

taken to our state supreme court and the case was some time ago submitted, but as yet no opinion has been handed down. After this litigation was begun, no further reports were made, circulars distributed, or anything else in that connection done, and no effort made by our board to enforce the state board order. If the court sustains the order, then, of course, consumption is contagious and must be so treated by all concerned. The circular, such as was in use before the Shurly case arose, is good. It is entitled "Information for Consumptives and Their Families." No sanatoria, special hospitals or special dispensaries. No society for the prevention of tuberculosis. No local bovine laws.

NEW ORLEANS: Sidney L. Theard, M.D., Secretary of the Board of Health, replied to all five questions in the negative.

MILWAUKEE: No laws or regulations concerning tuberculosis in man. Reporting of cases is not compulsory. Good rules for consumptive patients circulated. Bacteriologic examination made gratuitously for physicians. No sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by F. M. Schultz, M.D., Commissioner of Health.

ST. PAUL: No laws except anti-spitting ordinance. No circulars; no sanatorium, special hospital or special dispensary; no society for the prevention of tuberculosis. Milk supply controlled and cattle tested. Reported by Gustav A. Renz, M.D., First Assistant Health Commissioner.

FALL RIVER, MASS.: Anti-spitting law. There seem to be no circulars issued, but the board of health attends to the gratuitous bacteriologic examination of sputum. Dr. Richards informs me that there is a movement on foot for the establishment of a municipal sanatorium. No society for the prevention of tuberculosis. No report received concerning bovine laws. Reported by Samuel B. Morriss, Sanitary Inspector.

INDIANAPOLIS: No laws or regulations concerning tuberculosis in man. State board circulars of information are distributed. No sanatorium, special hospital or special dispensary. No society for the prevention of tuberculosis. No bovine laws. Reported by Eugene Buehler, M.D., Secretary Board of Health.

LOUISVILLE, KY.: Cases of tuberculosis are made reportable. Ordinances for informing the public have not been adopted, but frequently recommended. No sanatorium, special hospital or special dispensary. No society for the prevention of tuberculosis. Ordinances requiring dairy cattle to be examined every three months and if necessary by tuberculin. Reported by M. K. Allen, M.D., Health Officer.

MINNEAPOLIS: No special laws; seemingly no circulars, etc.; no sanatorium, special hospital or special dispensary; no society for the prevention of tuberculosis. Rigid inspection of cattle from which milk supply is obtained; every herd is tested once a year. Reported by P. M. Hall, M.D., Commissioner of Health.

NEW HAVEN, CONN.: Consumption is declared an infectious and communicable disease and dangerous to the public health. Rooms are to be disinfected after removal or death of patient. No circulars; no special institutions; no society for the prevention of tuberculosis; no municipal bovine laws. Reported by Ward Bailey, Clerk Board of Health.

PROVIDENCE, R. I.: No laws or regulations concerning tuberculosis in man, except anti-spitting ordinance; no circulars, etc.; no sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; no bovine laws. Reported by Charles V. Chapin, M.D., Superintendent of Health.

ROCHESTER, N. Y.: Cases are made reportable, but no inspection of cases is made by the health department, nor any restrictive measures enforced. An excellent circular on the prevention of consumption is issued. No sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis, but the Rochester Public Health Association is doing the usual work of such societies. No bovine laws. Reported by Geo. W. Goler, M.D., Health Officer.

SYRACUSE, N. Y.: Anti-spitting law. Physicians are requested to report cases, but no isolation attempted. Excellent circular for information of consumptives and those living with them has been placed in every house in the city. No sanatoria,

special hospitals or special dispensaries; no society for the prevention of tuberculosis. Excellent bovine laws. Reported by B. S. Moore, M.D., Health Officer.

TOLEDO, OHIO: Fumigating of house after death of patient. State board circulars are distributed. No sanatoria, special hospitals or special dispensaries; no society for the prevention of tuberculosis; an excellent milk ordinance. Reported by W. W. Brand, M.D., Health Officer.

ST. JOSEPH, Mo.: No laws or regulations except anti-spitting ordinance; no circulars, etc.; no special institutions; no society for the prevention of tuberculosis; no bovine laws reported. Reported by H. N. Keener, M.D., Clerk Board of Health.

LOWELL, Mass.: H. H. Knapp, Agent, replied to all five questions in the negative.

ALBANY, N. Y.: Anti-spitting law. Circular is sometimes sent when cases are voluntarily reported. No special institutions; no society for the prevention of tuberculosis; no bovine laws. Reported by Joseph D. Craig, M.D., Health Officer.

CAMBRIDGE, Mass.: Anti-spitting law; no circulars. Gratuitous bacteriologic examination of sputum; no special institutions; no society for the prevention of tuberculosis; no bovine laws. Reported by James B. Sloper, Clerk Board of Health.

THE ANSWERS SUMMARIZED.

A summary of the answers reveals the fact that 3 states and 4 cities make the reporting of cases of tuberculosis obligatory, 5 states and 5 cities optional; in 1 city (Detroit) the matter is under litigation. Two states have general anti-spitting laws, 5 states report local and 13 cities individual anti-spitting laws. Twenty-two states and 7 cities issue circulars and recommendations. The United States government has 2 sanatoria, 5 states have 5 special state institutions (Maryland, State Hospital; Massachusetts, State Sanatorium; Minnesota, Hospital for Tuberculous Prisoners; Mississippi, Hospital for Tuberculous Insane; Texas, Agricultural Colony for Tuberculous Prisoners). Nine states have projected state sanatoria, viz., Connecticut, Louisiana, Maryland, Minnesota, New Hampshire, New York, Ohio, Rhode Island, Wisconsin. Tent colonies for tuberculous patients are reported to exist only in Massachusetts and Pennsylvania. Only 3 cities (New York, Chicago and Buffalo) have special municipal consumptive hospitals. Boston cares for its poor in the various private institutions; New York, besides its hospital on Blackwell's Island, maintains likewise a large number of tuberculous patients in private institutions. Only one city has a special tuberculosis dispensary. Eleven states have a total of 42 private institutions, some are supported by private charity, some partially self-supporting and some are for paying patients only. Five states have state societies, 5 cities have city societies for the prevention of tuberculosis and one city (New York) has a special committee for the same purpose. Twenty states have special laws to combat bovine tuberculosis, and 12 cities have their own bovine laws. Three states have no boards of health. Twenty states have done nothing regarding tuberculosis in man or beast; 6 states have only done something regarding tuberculosis in man and nothing in beast, and 8 states have only done something regarding tuberculosis in beast and nothing in man.

REMARKS ON CONDITIONS IN VARIOUS STATES AND CITIES.

Now let us in the spirit of kindness review some of the reports received, showing the works which the various boards of health are doing, and see what we can learn from their defects or how profit by their excellencies.

The first dissimilarity which confronts us is in the various laws relating to the reporting of cases of tuberculosis to the respective health authorities. I would

suggest that in the interest of demographic and statistical science and in the hope of the discovery of some of the underlying causes of the disease when it is seemingly confined to certain districts, houses or families, that all cases of pulmonary or laryngeal tuberculosis should be reported. These reports should, however, be confidential, not on postal cards, but in letters, and the records should not be open for inspection except with authorization of the head of the department and for valid reasons. On receiving a report from a physician the health department should send to him, enclosed in an envelope, printed general hygienic and prophylactic instructions, to which the physician in charge of the patient should attach his signature. To these printed instructions the physician can add his verbal advice.

While disinfection at regular intervals of the rooms during the lifetime of the patient would be the ideal method, the advisability of more or less disinfection of the rooms must be left to the discretion of the attending physician. The disinfection of rooms after removal or death should, however, be obligatory, particularly in hotels, boarding houses, health resorts, hospitals and sanatoria. There should be no charge for disinfection for the poor. A sanitary inspector should only have the right to visit the premises of the patient when the attending physician or the family desires to have this done. On the other hand, it would seem to me a vital duty of the board of health to inspect regularly all institutions which admit cases of pulmonary tuberculosis for treatment and care, and to insist on a systematic execution of all the necessary precautions concerning the prophylaxis of consumption. All those of you who have visited, as I have done, many of the so-called "homes" or "hospitals" for consumptives, some even sailing under the name of "sanatorium," where there is often not even a visiting, much less a house physician, will bear me out in the statement that these institutions may constitute a great danger to the community. No matter how devoted the priest, minister, sister superior or matron may be in supervising the "home," in an assembly of consumptives to carry out the hygienic and prophylactic measures requires the strong will and the thorough medical knowledge of the physician especially trained for such an important position.

The board of health which makes the reporting of tuberculous cases compulsory must, however, also be prepared to offer hospital accommodations for any case which may be reported to the health officer as in urgent need of isolation, as, for example, when the attending physician considers the environments of the consumptive such that proper precautions against infection can not be carried out.

(To be continued.)

The illustrated conclusion of Dr. Knopf's paper will appear next week. This is the opening article of the Symposium on Tuberculosis. The other articles which will appear, with the discussions thereon, in the succeeding issues are as follows:

The Army Hospital and Sanatorium for the Treatment of Pulmonary Tuberculosis, at Fort Bayard, N. M. D. M. Appel, M.D., Fort Bayard, N. M. (Illustrated.)

Sanatorium Treatment of Tuberculosis. Analysis of Three Hundred Cases Treated by the United States Marine-Hospital Service Sanatorium. P. M. Carrington, M.D., Fort Stanton, N. M. (Illustrated.)

The Sanatorium Treatment of Consumption. S. G. Bonney, A.M., M.D., Denver.

Some Practical Points on the Treatment of Pulmonary Tuberculosis. J. Edward Stubbert, M.D., New York City.

Recent Investigations Concerning the Relation of Human and Bovine Tuberculosis. D. E. Salmon, D.V.M., Washington, D. C.

The Intertransmissibility of Human and Bovine Tuberculosis: A Review of the Experimental Evidence. R. R. Dinwiddie, M.D., Fayetteville, Ark.

Sanitary Measures for the Prevention of Tuberculosis in New York City, and Their Results. Herman M. Biggs, M.D., New York City.

ESSENTIALS IN THE CONSTRUCTION OF HOSPITALS FOR LARGE CITIES.*

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CHICAGO.

Almost every large city in this country has under contemplation the construction of one or more hospitals at the present time, and during the next few years hundreds of these public institutions will be constructed in this country. This will involve the expenditure of many millions of dollars, and will produce good or bad facilities for the treatment of millions of patients in the future. If these institutions are properly planned, the amount of good which will accrue to the citizens of this country for the amount of money expended will be vastly greater than if they are badly planned. The good features of a well-planned hospital will have a permanently beneficial effect on the community supporting the institution, and in the same manner a badly planned hospital will be a constant source of inconvenience, if not a real menace. For these reasons it seems proper for this subject to be discussed by the representative surgeons and hospital men who compose, to a great extent, the Surgical Section of the American Medical Association.

THE COMMON BASIS OF HOSPITAL CONSTRUCTION.

Singularly enough, the work most extensively consulted by architects who are called on to provide the plans for hospitals, is "Hospital Construction and Organization." "The Johns Hopkins Hospital, 1875," is one which was based on observations made 27 years ago. The authors of these essays did their work so well that no one has seriously attempted to criticise them since, and the work has stood with authority for these many years. One can obtain a fair idea of how thoroughly the plans and theories laid down in these essays have been accepted by architects who have been called on to plan hospital buildings by the comprehensive work of Henry C. ... and Asylums of the World, J. A. Churchill, London, 1893." This work gives the plans of all the important hospitals which were constructed before the close of its publication, and virtually all of these contain the same essentials in their construction.

THE NEED OF NEW PRINCIPLES IN CONSTRUCTION.

When we bear in mind that during this time everything in our theories concerning infection, contagion and hygiene has changed, and that scientifically proven facts have taken the place of theories, does it not seem strange that we should still adhere to the same essentials in hospital construction? Could an architect build an office building to-day on essentially the lines of thirty years ago, or a hotel or a factory or a library or a brewery or a building utilized for any industry in which there has been progress?

This work was written before we were acquainted with the cause of infection; before we knew that infection means the planting by contact of definite micro-organisms; before we knew that these micro-organisms develop under definite conditions, and that their development can be prevented or inhibited at our will. It is true that Pasteur had opened the way to our present conception of infection before this time, but his theories had not yet taken a definite practical form. At that

time observation had demonstrated the fact that if one patient in a given part of a hospital became infected, the other patients were likely to suffer in the same manner and that patients in another building at a distance might remain free from the infection, consequently it seemed wise to separate as much as possible the patients in separate pavilions. At the present time we know that the infection was carried from one patient to the other through the ignorance of the attendant who manipulated all the patients in the same pavilion, but could not contaminate those with whom he did not come in contact. This fact is so well understood now that it seems superfluous to mention it. Every one connected with hospital work is drilled on this fact so that in well-regulated hospitals infection of wounds in the same pavilion is no more likely than it would be if they were any given distance apart.

THE GENERAL PLAN.

A knowledge of this fact should eliminate the construction of hospitals extending over large areas, if there were no other reason except the fact that there is greater economy in construction and maintenance of a compact building. A compact building can be heated at a smaller expense, the food can be supplied to the patients more easily and with less labor, hence more economically; the amount of cleaning and painting and repairing is decreased. There is less roof surface exposed, and the time of the visiting staff is economized because the attending physicians and surgeons are not compelled to travel great distances in visiting the patients in different wards.

Ever since Pasteur's observations determined the presence of micro-organisms in the ordinary air and their absence in the air on high mountains, it has become more and more apparent that the air near the surface of the earth contains more micro-organisms than that higher up. This is especially true in cities in which the street dust is laden with germs and is much thicker at the level of the first than at the level of the higher stories. Our own observations have again confirmed this well-established fact. This fact must condemn low hospital buildings, because in these the patients are forced to live in the most unfavorable conditions as regards the air they are compelled to breathe. This fact, although already discovered by the observations of Pasteur and his pupils, had not been generally considered when the Johns Hopkins essays were published, but now that we are familiar with this fact it seems unfortunate that it is not generally made use of in hospital construction. The same principle applies to the building of operating rooms. A number of palatial operating pavilions have been constructed on the ground floor in great cities, whereas they should have been placed in the garret of a tall building.

FIRE-PROOF CONSTRUCTION.

Twenty-five years ago it was not wise to build high hospital buildings because of the danger from fire. This danger no longer exists because absolutely fire-proof buildings can now be easily constructed out of stone, brick, tile, concrete and steel. It is true that some so-called fire-proof buildings have been burnt, but never those which were honestly constructed, in which there was no wood used except for floors and window frames and doors, and in which each story was separated from the one above by a ceiling of hollow tile or concrete in which the steel was imbedded. Of course all of the partitions, closets and air shafts must be constructed of hollow tile or cement, and in fact there must be no wood

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.

except in the floors, doors and windows, and even these parts can be made of fire-proof material.

A hospital not constructed absolutely fire-proof at the present time should be condemned, even though it be only one or two stories high. This is especially true because at the present time a hospital is likely to contain

LOCATION AND ARRANGEMENT OF DEPARTMENTS.

These are the main considerations and all these are relatively new and should be borne in mind in the construction of hospitals at the present time. The minor considerations will be treated later, not because they



Fig. 1.—Augustana Hospital. Sixth floor plan.

KEY TO HOSPITAL PLANS.

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|----------------------|------------------------------|------------------------|------------------|
| A.—Recovery room. | G.—Amphitheater and balcony. | M.—Anesthetizing room. | T.—Toilet. |
| B.—Bath room. | H.—Supply room. | N.—Nurses' room. | U.—Dining room. |
| C.—Corridor. | I.—Instrument room. | O.—Operating room. | V.—Private room. |
| D.—Dressing room. | J.—Steam cooking room. | P.—Pantry. | W.—Ward. |
| E.—Elevator. | K.—Kitchen. | R.—Recovery room. | X.—X-ray room. |
| F.—Sterilizing room. | L.—Linen room. | S.—Sanitary. | Z.—Store room. |

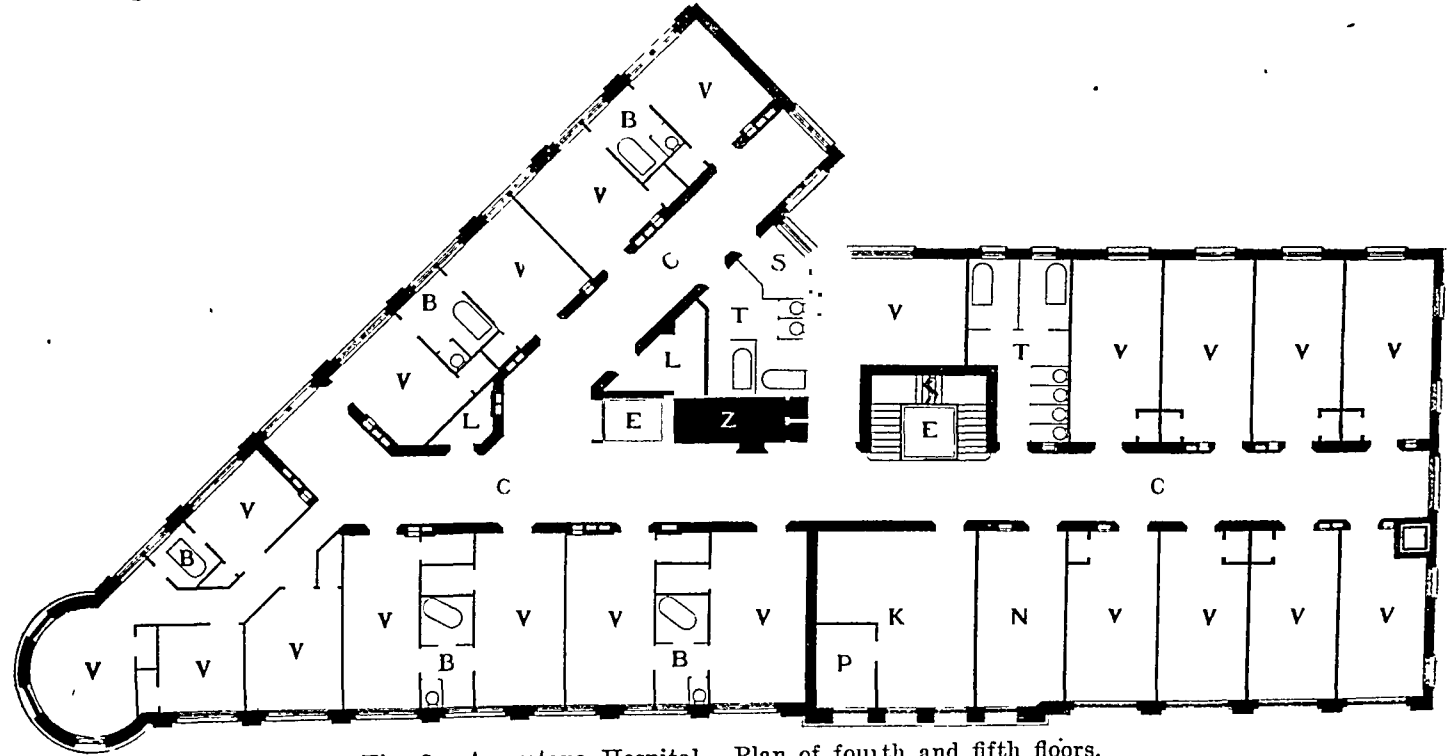


Fig. 2.—Augustana Hospital. Plan of fourth and fifth floors.

a very large proportion of patients, who have just undergone serious operations and could consequently not be moved with safety in case of fire. The use of the modern elevator is another important factor which makes high hospital buildings especially convenient.

are unimportant, but because I wish to emphasize the greater importance of the adoption of high hospital buildings for large cities. With a given area of land on which to build, it is plain at once that with a high building many favorable con-

ditions can be secured which will be impossible with low buildings of the same number of beds.

1. The building can be set back from the street, which will still further lessen the amount of street dust. It will also lessen the disturbance caused by the street noise.

2. If land can be secured overlooking a park or any other attractive landscape, the higher the building the more patients can obtain a view of this landscape.

3. The building can be more easily placed so that every room and every ward secures sunlight during some portion of the day. With the low buildings one is constantly compelled to infringe upon the sunlight in order to secure a sufficient amount of space for the number of beds required, while with the high buildings one simply adds another story which in no way interferes with the remaining portion of the building.

4. The hospital can be conveniently located for the patient as well as for desirable physicians and surgeons for its staff. Relatively speaking, the air above the second story in a well-chosen portion of the city in

VENTILATION.

In the climate of the United States the air supply of the hospital must come during the warmer portion of the year directly from the outside through open windows or through ventilating flues in the walls. During the colder part of the year the fresh air should be forced into the upper portion of the wards and rooms by means of revolving fans. This air should be taken from a tower above the roof.

It should first be washed by passing through strands of oakum or other similar material suspended in the horizontal portion of the air-shaft, a small amount of water being permitted to trickle over these strands constantly; then it should pass through a long shaft, extending preferably through the entire length of the building. This shaft should contain coils heated with steam or water. The outside of this shaft should be covered with some material which prevents the radiation of heat, in order to economize fuel. Taking the air from a tower some distance above the roof of a high building, it is nearly free from micro-organisms;

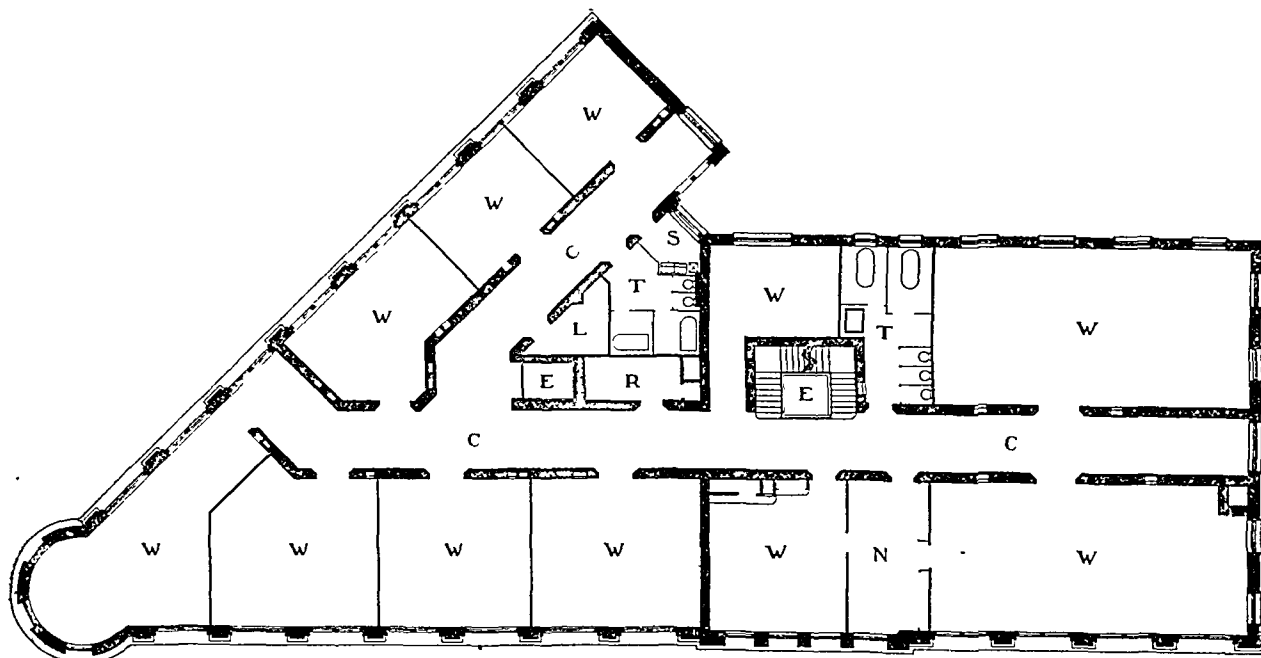


Fig. 3.—Augustana Hospital. Plan of second and third floors.

which the surrounding buildings are not high compares favorably with the air in the first story in the outskirts of a large city. And the air in the sixth story is nearly as pure as country air.

If a great physician or surgeon can be saved an hour's time each day which he would be compelled to spend in going to and from the hospital located a great distance from his residence, his services can more easily be obtained, and this time in itself given a hospital service will amount to a great deal during each year. There can also be no doubt that much harm is done to many very acute cases by being carried great distances to the hospital. I need but mention those suffering from severe pneumonia, typhoid fever or peritonitis.

Of course the same care should be exercised in selecting a location. It should be as high as possible, near a park, river or lake in as quiet a location as available, away from the street cars or railroad tracks and still easily accessible to patients and their friends. The larger the grounds the better it is for the institution.

this can be freed from particles of soot and introduced into the hospital clean and heated to the desired temperature. The foul air should be carried out of the rooms and wards through flues opening near the floor.

In portions of the country with especially severe winters this system of heating may be combined with direct radiation from steam or hot-water coils, only enough air being forced through the heated air-shaft for ventilation, the greater portion of the heat being supplied by the more economical direct radiation.

A very simple method devised for heating and ventilating is the direct, indirect method, one which has been used to some extent in hospitals. The heating is all direct, the air coming in through louvers, passing through a register which can be opened or closed at will, back of which is an extremely fine mesh screen which is removable, so that it can be readily cleaned. All the air goes into a duct, two screens made of cheese cloth and removable being interposed. These can be made damp and changed as required. At the bottom of the duct are two small doors into which can be placed a pan

of water. This will serve the double purpose of taking up the particles which may get in and of giving humidity to the air. The air falls directly over the radiator through the duct, and this duct being back of the radiator, the chill is taken off the air primarily. It then rises and traverses the entire room to the duct at the floor which leads to a large air chamber in the attic space between ceiling and roof, giving room for a great volume and thus a regular circulation. This attic space is ventilated by a shaft thirty feet above the roof and may be made to work either naturally or mechanically, the first by means of a cowel facing the aperture from the wind and so creating a vacuum directly in front, and a plenum state directly behind the shaft. A simple mechanical process is the placing of a radiator of large capacity at the base of the shaft or duct and so creating a current of air by convection. An ordinary gas jet at the bottom of each shaft will in many instances suffice. This method has many strong advocates.

LIGHTING ARRANGEMENTS.

If a hospital building is placed from north to south, being long and only wide enough for a row of wards or rooms on each side of a central hall, then all the

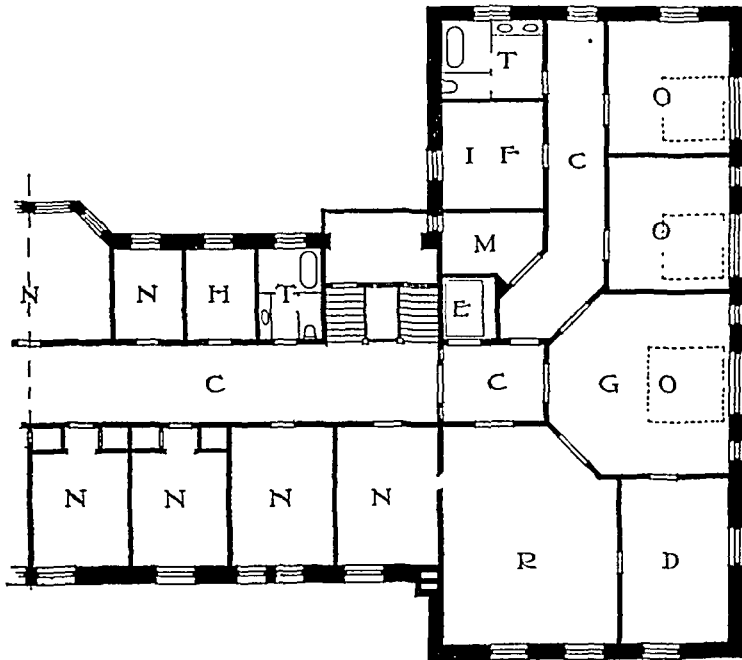


Fig. 4.—St. Mary's Hospital. Part of fifth floor.

rooms and wards on one side are exposed to sunlight during the entire forenoon and on the other side during the afternoon.

In visiting many hospitals I have found that only in a few instances care has been exercised to obtain sunlight for every room and ward in the institution, and the dark corners are very common.

Ordinary illuminating gas is the least desirable of all artificial lights. It gives rise to much soot, gives off much heat and consumes much oxygen, and in most institutions it does not give a clear, uniform light unless some form of asbestos mantle is used.

Incandescent electric light is clean and does not consume any oxygen and gives off but little heat, but the radial power is not good, compared with the cost of production. Acetylene gas consumes some oxygen, but compares well otherwise with incandescent electric light; it is possibly the most economical form of lighting. There is very little heat produced and no soot.

KITCHENS.

The kitchen is one of the most common sources of annoyance in hospitals because of the odors which are

very offensive to the sick. This can be remedied by placing the kitchen in the garret. All the odors from cooking rise, hence the location of the kitchen in the garret will at once eliminate this source of trouble. The range should be placed in the center of the room and a good skylight and ventilator put over it. Another remedy lies in building a separate small building at some distance from the main hospital building for the housing of the boilers, engines, dynamos, if electric illuminating is employed, the kitchen and the laundries.

Each floor should, of course, have its own little diet kitchen, and these should be directly below the main kitchen or in such position that there will be direct communication by dumb waiter.

FLOORS.

In the halls, bathrooms, closets, kitchens, operating and dressing rooms, some form of flooring which is impermeable to moisture, such as tiling or glass, has now been generally adopted with great satisfaction, because it can be easily kept clean and is attractive in appearance. In the wards and rooms hardwood floors laid on the cement covering which isolates the floor from the lower story seems preferable. This should be covered by some dressing impermeable to moisture in order to prevent septic materials from penetrating the pores of the wood. A careful application of grain alcohol shellac closes the pores.

WALLS.

The walls should be covered with paint which prevents the plaster from becoming filled with germs. These walls can be washed and thus rendered aseptic after the rooms have been occupied by patients with suppurating wounds.

In the operating rooms and dressing rooms walls covered with tile, marble, glazed brick or glass are very attractive, but they are in no way superior to those which have been carefully covered with hard enamel paint which is impervious and acid proof.

PLUMBING.

There is no part of the construction of a hospital which requires greater care than the plumbing, but, fortunately, this branch has been so perfectly developed in house and hotel construction that any good architect whose attention has been directed toward the importance of this part of the construction will be enabled to furnish safe and satisfactory plans. One essential that should be introduced in all hospitals is a large slop sink or hopper with a water seal—in fact, an enlarged syphon-jet water closet with a large flushing tank. The utility of such a device can be seen at a glance. The aperture at the top should not be less than 24 inches square in order to prevent spilling in emptying bed pans and other utensils. The bathroom should be separated from the water closet and both should have large outside windows, and these should, if possible, reach to the ceiling, in order to light every part of these rooms from above, which will make it much more difficult for the servants to slight their work in keeping these departments clean. Storerooms should be well lighted, for often a dark storeroom serves to accumulate unclean material, because the dirt escapes detection by those in authority.

STERILIZING ROOMS FOR MATTRESSES, BEDDING, ETC.

There should be two sterilizing chambers, each sufficiently large to sterilize all the bedding and mattresses to be used for an entire week, so that while the material is being used from the chamber in which ster-

ilization has been completed the other sterilizing chamber can serve for the accumulation of the next amount of material to be sterilized. There should also be a space left set aside for airing and sunning the bedding, which may be arranged on the roof.

Sterilization of instruments, utensils, dressings, towels and operating gowns is accomplished in a most

The accompanying drawings, kindly furnished me by Messrs. Hallberg & Sturm, architects of the Augustana Hospital, and Mr. Henry J. Schlack, architect of St. Mary's Hospital, both of Chicago, illustrate the arrangement of two floors in each building. one for private patients and one for ward patients, the floors for private patients being the higher. those for ward patients

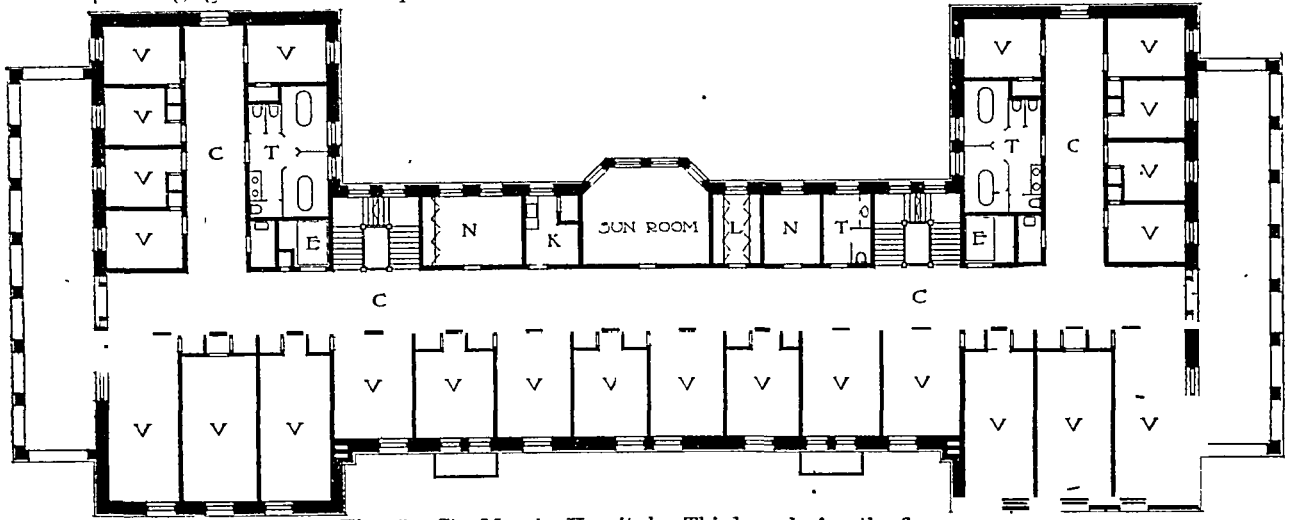


Fig. 5.—St. Mary's Hospital. Third and fourth floors.

perfect manner in the various sterilizers which can be purchased from the manufacturers of such appliances.

SOME MODEL CHICAGO HOSPITALS.

I have been interested in the building of two of the larger hospitals of Chicago which have been under my surgical management for some years. The architects who planned these institutions incorporated the ideas brought out in this paper and the results have been most

the lower floors. The first floor is occupied by offices, waiting rooms, examining rooms, laboratories, etc., so that all the patients are above the first floor.

I also show the operating rooms, which are on the sixth floor in each institution, where their construction was possible at a much smaller expense than if placed in a separate pavilion, and still the conditions are much more favorable for an aseptic operating room than they

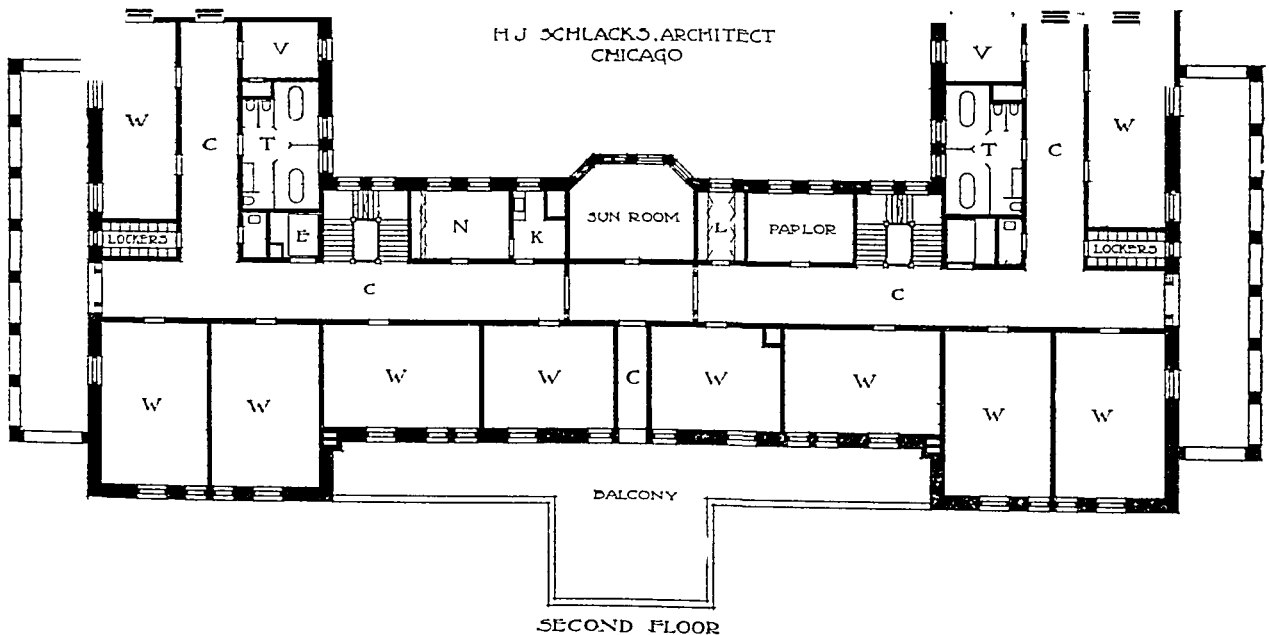


Fig. 6.—St. Mary's Hospital. Second floor.

satisfactory. These institutions are six stories in height and extend from north to south, with a large corridor extending the entire length of the building. There are no dark corners and very few convenient places for the accumulation of dirt. These institutions furnish better air than do one or two-story buildings and still they can be conducted at a much slighter expense.

would be on the first or second floor. Of course, it would be possible to add as many more stories as might be desired in order to increase the number of beds without in any way impairing the hygienic conditions present.

During the past sixteen years I have given a great amount of attention constantly to the study of hospital construction. I have visited most of the hospitals

of the large cities in this country and Canada, as well as those in most of the large European cities, and have studied the plans of most of the other hospitals which I have not personally visited, and I am confident that the hospitals of the large city in the future must be a high building constructed on the essentials emphasized in this paper.

EXPLANATION OF ILLUSTRATIONS.

Figures 1, 2 and 3 are taken from the plans of Augustana Hospital, which is to be completed next year, only the south half being finished at the present time.

Figures 4, 5 and 6 are taken from the plans of St. Mary's Hospital, which was completed last spring.

Figure 1 shows the top floor, the greater portion of which is given up to a series of operating rooms, dressing rooms and recovery rooms, and to the kitchen and dining rooms. These departments, it will be seen, are practically isolated from each other and from the remaining portion of the hospital.

Figure 2 represents the fourth and fifth floors, which are occupied entirely by private rooms and are provided with every comfort and convenience that may be desired by private patients.

Figure 3 represents the second and third floors, which are occupied entirely by wards. The large wards at one end of the floor, I believe, are a mistake, especially in a hospital where bedside teaching is done, because of the unnecessary disturbance of a large number of patients; moreover, it is easier to obtain uniformly good nursing if each nurse has assigned to her a ward sufficiently large to occupy her time than if a large ward is under the joint care of a number of nurses. It is much better to have all the ward patients together on the same floor and all the private patients on another floor than to have them mixed, because it avoids jealousies and dissatisfaction. In this institution the second floor contains the wards for male and the third for female patients, which further simplifies the management of the institution.

Figure 4 represents the plan for the operating, sterilizing, anesthetizing, supply and dressing rooms in St. Mary's Hospital. Being placed in the top of a high building, the light and air are ideal and the expense of construction is exceedingly low.

Figure 5 represents the third and fourth floors, which are occupied by private rooms and small private wards. In this portion of the plan the large hall extending through the entire length of the building and ending in a broad veranda at each end is especially attractive.

Figure 6 represents the second floor, which is occupied by the larger general wards, with an isolation room at each end. The two central wards, with a veranda on the east side of the building, are occupied by children. The south end is occupied by women and has a large veranda, while the north end is arranged in precisely the same manner and is occupied by the men.

There are many details which are interesting but whose description would consume too much space.

710 Sedgwick Street.

DISCUSSION.

DR. H. M. SHERMAN, San Francisco—Dr. Ochsner's statement that modern methods of constructing buildings should be applied to hospitals is one to which we will all agree, as, for example, a hospital constructed like the Manhattan Hotel in New York, where everything is of non-combustible material. The floors and windows could be made of even less combustible material, I am sure. Dr. Ochsner puts aside the pavilion hospital, but such a building as he describes is practically one of superimposed pavilions, each floor representing a pavilion.

The gain which he makes in the way of sunlight and air by the elevation is manifest. It seems to me that there is a point which can be criticised and that is in the amount of plumbing. In one plan the bathrooms, etc., are in the two wings and the center of the building is quite free of any plumbing. In going through the hospital I was impressed with this same fact. I think if Dr. Ochsner is going to economize his nurses he must also economize his nurses' time. The amount of running to and from which a nurse would have to do in passing to and from the bathroom would be a considerable amount each day. In the construction of the children's hospital in San Francisco, I had to deal with an exceedingly obstinate architect. I had to calculate the steps between the bed which is farthest from the bathroom and found that the nurses walked two or three miles which could have been eliminated. The walks, of course, were broken, which is the only way they could stand it. With modern plumbing, such as you see in a modern hospital, which is absolutely perfect in its theoretical and mechanical construction, it would be possible to put in another bathroom which would answer admirably for the nurse. Then, too, surgeons are always washing their hands, and a nurse has to go and get the water every time it is needed. In other words, she has to go to so much trouble which is not necessary. Hot and cold water should be in every ward even if it contained only two beds. Another practical point is the heating of hospitals. We are using petroleum for fuel and it is exceedingly economical, the escaping steam being used for heating the building. Dr. Ochsner has put his operating-room at the top of the hospital and his kitchens should be the same place. Such a hospital as this, which should be very near the hotel center of the city so that hotel people could be transferred to it, should also have an annex in the country to which could be transferred such patients as have a long convalescence. Such a hospital in the center of the city offers good opportunities for the people who have a long convalescence and can not be moved to the country. The pure air of the country, the weather outlook and the opportunity to get out of doors, which is denied in the center of the city, is to be thought of. Any one building such a hospital as this should have weather plans and also include the country annex.

DR. E. W. CUSHING, Boston—I think that the author of this paper has rendered a great service. The work of Burnett, in England, and the example of the Johns Hopkins Hospital, in this country, seem to have remained as absolute standards of authority with architects and constructors of hospitals, although the theories as to the nature of infection and the knowledge of means to prevent it have greatly progressed since these works were written. I am interested in the planning of one of the great new hospitals of Boston, and I have been surprised to find how little has been written on hospital construction in the last ten years, or since the time when it was understood that infection of wounds was caused by actual contact of a solid or liquid medium rather than through the air, and since it has become possible to construct thoroughly fire-proof buildings. In large cities, where land is very valuable, it is evident that it is cheaper to build hospitals with less superficial area and higher than has been customary. With modern methods of heating and cooling and ventilating and with modern sanitary plumbing there seems no reason why a hospital should not occupy several of the upper stories of a lofty building in the heart of a great city. It is also true that in a hospital thus centralized in one building there are economies in heating and in the smaller distances to be traveled by nurses and others. It is not usually considered that extra steps for nurses mean a larger number of them and extra expense. It is certainly a great convenience for the visiting staff to have the hospital in a convenient place, and the same may be said in regard to the friends and relatives of the patients.

Nevertheless, for large general hospitals there are greater advantages in having plenty of land, so that there can be grounds for the ambulant and convalescent patients, and, although surgical infection may be usually carried by physical contact with an infected body, yet when the hospital gets crowded there are times in the best of hospitals when the wounds do not do well, even with all the refinements of modern

technic. We can not deny that in medical diseases the atmosphere is sometimes a carrier of infection, and when it comes to a large hospital with all sorts of diseases, including offensive cases, and with provision to make for a pathologic department, an autopsy room, etc., there will always be great advantages in locating the hospital in a suburb and on a hill, with plenty of land to allow for separate buildings for various purposes and to permit of future growth of the institution.

DR. GEO. W. CRILE, Cleveland—Dr. Ochsner has opened an important field for discussion. So far as the principles he lays down are concerned there is little to be said. While his system is to my mind almost perfect there are one or two points that occurred to me might be open for discussion. If a hospital is a teaching hospital then I think it is better, for obvious reasons, to have the pathologic building isolated. It would seem difficult to secure satisfactory isolation by this plan of construction. The pathologic pavilion should also be of considerable size. It is desirable to have the storehouse, kitchens, etc., in a separate pavilion. The plan of construction outlined is probably the best available if economy must be practiced.

DR. OCHSNER, in closing—I gladly indorse all of Dr. Sherman's points. It is intended that this hospital should be located in the residence portion of the city, away from the noise and smoke. The idea of having a separate annex at some distance from the city is a good one for patients who have only to be seen by the attending physician once or twice a week. The matters of heating and ventilation are carefully discussed in the paper. The kitchen is on the top of the building, entirely separated from the rest of the house, and the cooling rooms are also on the top. There are two recovery wards for patients after anesthesia. A small isolation room for dying patients has been provided for on each floor, and isolation wards for scarlet fever, erysipelas, diphtheria and other contagious diseases are provided for at a distance in a separate building. I believe that when there is an epidemic of supuration in cases which should heal primarily, a condition which Dr. Cushing has mentioned, it is not necessary to separate the cases because the cause of this is always found in some particular person, either a nurse or an assistant or the surgeon himself, who has been careless, and as soon as the error is corrected the suppuration ceases to occur in future cases. I believe a hospital of this size is very badly constructed unless it has a large garden, and we should not permit any one to build a hospital unless they provide such a garden. Dr. Crile's remarks concerning the location of pathologic laboratories are quite in accordance with my views on this subject.

DEATH DUE TO X-RAY?

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NARRATION OF THE CASE.

History.—Sept. 9, 1901, Miss X. (aged 47) was admitted to Dr. Kelly's service, complaining of "pain in the left side, frequent micturition, general weakness and fever." Her family history was unimportant. The chief features of interest in her past history were that three years ago, after the fatigue following her attendance on a sick sister, she was seized with severe pain in the left side of the abdomen. Within a year this pain disappeared, but returned after an attack of grip, two years ago. Her physician at this time discovered both stomach and intestinal trouble, and the patient was treated by gastric lavage and by enemata. During this time she suffered from pain in the left side and back and from constipation and nausea at times, but never from vomiting. Ten days previous to her admission she had a chill followed by fever, and one week later she had a second rigor.

Physical Examination.—On examination the thoracic organs were apparently in good condition. The abdomen appeared normal in every way and nothing was made out on palpation or percussion, although it must be admitted that a satisfactory investigation of the viscera was not possible owing to the rigidity of the abdominal wall. Inspection of the genitalia

revealed the presence of abscesses of Skene's ducts and of urethritis.

September 10 the pelvic organs were examined under ether and found normal. No masses were palpated in either kidney region. The left ureter was catheterized with a wax-tipped catheter, but on its withdrawal no scratch marks were discernible. As the eye of the catheter was occluded, urine was not collected from this kidney.

Urine, however, taken from the bladder, was acid in reaction, contained no sugar, but revealed a considerable amount of albumin. On standing, there was a heavy white precipitate composed of epithelial cells, hyaline and finally granular casts and numerous leucocytes.

The patient's temperature was normal. She was discharged from the hospital, but came to the dispensary for treatment.

Treatment.—The urethritis and abscesses of Skene's ducts yielded to treatment, the urine became normal, and the patient was relieved of frequency of micturition, but the pain in the left side persisted. The symptom-complex of pain in the left side and back, associated with nausea and chills, suggested the probability that there existed a stone in the pelvis of the kidney, which the wax-tipped catheter had failed to reveal.

Skiagraph Taken.—Accordingly, a skiagraph was taken October 8. Two exposures, each lasting twenty minutes, were made. A Leed's coil was used—spark 3 inches—and tube was 16 inches from plate, about 6 inches from abdominal wall. The picture threw no light on the case.

Dermatitis.—About four days later, according to the patient, little papules appeared over an area one-half the size of the hand, just above and to the left of the umbilicus, where there was intense itching and burning. In the course of three weeks the skin over the entire abdomen became dry and assumed a purplish-red color. Soon "blisters" about three-quarters of an inch in diameter appeared. These broke and discharged a thick, yellowish material. Up to this time boric or zinc ointment had been used as a dressing. But as the patient could not receive the proper attention at her home she was again brought to the hospital, November 17. It was at this time that she first came under my observation. On examination the patient was seen to be well nourished. Her mucous membranes were of a fair color, tongue slightly coated. Lungs and heart negative. Blood was normal. No eosinophilia or leucocytosis.

Description of the Skin Lesion.—Abdomen was full, rounded and normal-looking in contour. Owing to the presence of the lesion about to be described, palpation was impossible. Quoting my notes taken at the time of admission: "Located on the center of the abdomen there is an area about 13 by 20 cm. in diameter, which is red and raw and completely denuded of epidermis. It is bathed with a thin, greenish-yellow discharge, which is apparently very irritating to the surrounding skin. On close inspection, one sees four distinct areas, which stand out from the denuded weeping surface on account of being somewhat paler and slightly elevated. Their outlines are indefinite, but their dimensions are apparently $2\frac{1}{2}$ to 3 cm. long by 1 cm. wide. These lesions, the patient claims, are scars, the result of counter-irritants applied in early childhood. The entire area is extremely tender to the touch, the slightest pressure causing excruciating pain.

"The epidermis immediately bordering this denuded patch is pale and macerated and lifeless in appearance. The entire abdomen beyond has a dark-brown color and the skin is thick and brawny, as far as the ensiform above, the pubes below, and laterally, it extends well into the flanks. (See cut.) The pubic hairs are almost entirely wanting."

Symptoms.—The chief symptoms complained of were "burning" in the wound and itching in the surrounding skin. The flanks seemed to be particularly painful and the right inguinal region was the seat of distressing pain, which was described as sharp and cutting in character.

Treatment and Course of Lesion.—Compresses of the filtrate from an admixture of lead acetate and alum in water were applied, and a 2 per cent. salicylic ointment was spread over the surrounding indurated skin surface. The painful area in

the flanks were treated by various counter-irritants. Under this treatment the epidermis grew in rapidly from the surrounding edges. The unevenness of the healing process gave the advancing epidermis at the periphery of the wound a pinked appearance. Just inside the white scarf-skin and bordering it all around the wound, in a band 2 mm. wide, the dark red, shiny, advancing epidermal growth could be seen.

So quickly did the new skin form that by December 7, about three weeks after admission, an area only 12 by 9 cm., and triangular in shape still remained unhealed. But now the process took a turn, the cicatrices before described broke down and formed ulcers which enlarged and undermined the skin and finally united, so that eventually there were one large ulcer and two smaller ones, the whole area covering a surface 14 by 14 cm. but still triangular in outline. The ulcers were about 3 mm. deep and covered with necrotic tissue, which was cleared away from time to time with salicylic acid. Under suitable treatment the ulcers granulated well, but there was absolutely no tendency for the epidermis to spread over the granulated surface, and on July 31, as there had been absolutely no improvement for two weeks or more, the ulcerated area was excised and skin grafted, but the grafting was not successful.

Patient's General Condition.—With regard to the patient's general condition since her admission, there is a great deal of



interest. From the beginning she was nervous and apparently weak, although she bore her suffering remarkably well. Her mental condition at times caused anxiety, for on several occasions she was very despondent and melancholia was feared.

Gastrointestinal Symptoms.—The chief difficulties in the treatment of the case and the most distressing features were associated with the symptoms referable to the gastrointestinal tract. Soon after the patient's admission to the hospital it was discovered that her constipation would not yield to ordinary treatment and that the ordinary laxatives were useless. She was given increasing doses of purgatives, and

powerful medication along with enemata, but our efforts were without result until the thirteenth day. The patient then experienced some abdominal discomfort and nausea, but no movements occurring every other day, but only

Dr. H. M. Smith, the employment of enemata and the use of drugs. On November 12, the bowels became again inactive and were applied to hospital. The patient became nauseated and vomited, for example, a hospital of bile-stained fluid. Examination of the in New York, where it was negative. All nourishment was discontinued. The floors and windows. Nutrient enemata were given and the material, I am sure. Dr. Oudin, Barthelémy and Darier, in their most admirable papers, review many cases that complained of nausea and vomiting after x-ray exposure. In Case 43

lost weight and strength, became depressed, and her condition was indeed serious. She had no stool now for practically twenty-two days, except that occasionally the enemata would come away slightly colored and flecked. Her gastric condition would not permit the administration of purgatives, and these (including croton oil), experience had taught were ineffectual. The only hope lay in moving the bowels. Hypodermics of atropia and strychnia proved useless; abdominal massage, owing to the ulceration of the wall, could only be partially practiced. But all efforts were unsuccessful until January 3, when there were three copious stools, and the bowels moved three to four times daily until the 12th. The patient recuperated rapidly, she became brighter, her pulse, which had risen to 140 to the minute (although her temperature was normal) fell to 110 and thereabouts. Her vomiting ceased and she again took food by mouth. Now that the bowels were again open, we took all measures to endeavor to keep them regular, but on the 12th of the month a repetition of the attack of vomiting, depression, high pulse (150) and constipation occurred and the patient was considerably worse than in the previous attack. For twelve days this persisted, when, for some unaccountable reason, the patient again had several copious movements, and as before she rapidly improved and took nourishment by mouth.

Operation.—It was at this time that the abdominal wound was at a standstill, and it was thought that the sooner the patient could be relieved of her suffering from the ulcer and the sooner she could get about the better would be her chance for recovery, for she certainly could not endure the strain of many more such attacks; and, as previously related, the ulcer was excised and skin grafted.

The patient recovered rapidly from the anesthesia and had far less nausea and vomiting than was expected in view of her condition. Within three days after the operation her bowels were moved and the nausea and vomiting ceased. Nourishment, which up to this time had been given per rectum, was now taken by mouth and retained. In fact, after the third day there was no nausea and there were copious bowel movements daily. In spite of the seeming improvement the patient became progressively weaker. At times during the night she was irrational, her pulse was of good volume and tension, but ranged between 120 and 140. Her temperature was irregular, reaching 100.5 on the second and fifth days after operation, and 101.7 on the ninth day. She lost rapidly in weight and strength. On the eighth day her mouth and tongue became ulcerated and soon were so tender that food, not even liquids, could be taken. Local treatment was of no avail. The patient steadily grew worse and died on the twelfth day after operation. An autopsy was not granted.

THE CAUSE OF DEATH UNDETERMINED.

What was the cause of death? Whether or not death was due to the x-ray could not, of course, be definitely settled without a section. It is most probable that the patient had some intra-abdominal trouble which we were unable to determine. On the other hand, the peculiar symptom-complex makes it appear as though the Roentgen ray may have produced some tissue changes of which we are totally ignorant. It seems probable that aside from the pathologic lesions produced in the nerves and vessels of the abdominal wall that similar injury may be wrought on the sympathetic system. The instances cited in which the prolonged use of the x-ray on the abdomen causes nausea and even vomiting plainly indicate that some obscure changes take place. In the cases in which the untoward effects are temporary, it is most rational to believe that there is no demonstrable pathologic process, but that merely a functional disorder of the internal organs exists.

CASES REPORTED IN LITERATURE.

Oudin, Barthelémy and Darier,¹ in their most admirable papers, review many cases that complained of nausea and vomiting after x-ray exposure. In Case 43

of their series, abdominal pain persisted for two months after a 45-minute exposure, but physical examination was entirely negative.

While the literature teems with recitals of cases of severe x-ray burns, there are extremely few references made to death following the use of the Roentgen ray. The few cases reported are incompletely given. I will give résumés of these cases.

CASE 1.—A man² in St. Paul met with a street car accident, and a skiagraph was taken. He has since died, and certificate of death attributes the unfortunate result to burns inflicted by the rays. The medical man who took the skiagraph denies that the patient was "burned so seriously as to cause fatal injury."

Here nothing is said as to the region of the body injured, extent of injury, time of death after the accident—in fact, none of the data necessary to the proper adjudgment of the case.

CASE 2.—Patient,³ female. Neck of femur was fractured and skiagraph taken April 7. Exposure lasted 2 hours. On April 27, a second picture was taken, with 2 hours and 10 minutes' exposure. Later the patient became mentally unbalanced, and the abdominal wall ulcerated, and she eventually succumbed. No further data are given, although death is attributed to the x-ray.

CASE 3.—In this case⁴, too, there was a fracture of the femur. Two exposures to the rays were made, twenty days apart. The first lasted 35 and the second 45 minutes. A 10-inch coil was used and 5½-inch spark. Eight days after the last exposure a "gangrenous slough" 6 by 3 inches formed on the abdomen. Death occurred six months later, and was attributed to "shock, as a result of fracture of the thigh and to the x-ray."

CONCLUSIONS.

From these few cases so meagerly reported one can not arrive at any conclusion. It is certain that in the literature there is no authentic case of death directly due to and following the use of the x-rays. All of the three cases had sustained an accident, and it is quite probable that death was directly or indirectly due to these injuries and that the Roentgen ray had nothing whatsoever to do with it.

Our case, it seems to me, is quite different from those cited. In the first place, there had been no accident and the patient was in a fairly good general condition before the burn occurred. That she gradually and steadily declined after the appearance of the abdominal lesion, there is no doubt. Whether this progressive decline, with the concomitant gastrointestinal symptoms, was due to internal tissue injury following the use of the x-ray, or whether it was the manifestation of some organic trouble, is very difficult to say. That the case was a very peculiar one is certain. I have reported it in the hope that if they exist it may bring reports of similar cases to press, and with the intention of bringing before skiagraphers the possible serious results that may be attributed to the use of the x-ray.

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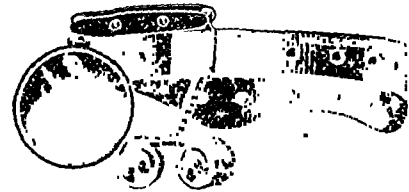
The progress of cremation in this country leads that of the entire world. There are twice as many incinerations in the United States as in all of the rest of the world combined. The number everywhere, however, is rapidly increasing. Spain is one of the last to recognize cremation. Russia will do so in the very near future.—*Meyer Bros.' Druggist*.

BINOCULAR MAGNIFIER FOR USE IN OPERATING.*

EDWARD JACKSON, M.D.
DENVER.

In using the binocular magnifier it is essential that the two lenses shall be kept the same height before the two eyes. Unless this is done binocular vision becomes impossible because of the vertical prismatic effect. To insure the keeping of the lenses in proper position the gutta-percha headband has been adopted to support the instrument. When this is obtained of the proper size softened by heat and molded to the head of the operator who is to use it, an ideal means of support has been secured.

To enable the operator to illuminate the field of operation and still keep both hands free for the operation, I have added a mirror to the instrument. This is illustrated in the accompanying cut.



Magnifier with illuminating mirror.

The condensing mirror of proper size and curvature gives as good lighting as the condensing lens ordinarily used for purposes of focal illumination. With it the source of light may be placed behind the patient or in whatever position may be most convenient. After the mirror has been properly adjusted, a very slight movement of the head will give any modification of illumination that may be desirable; and, without an assistant, both hands are left entirely free for use in the operation.

The instrument is of great practical service in such minor surgery as the removal of misplaced lashes, or of foreign bodies embedded in the cornea; as well as in more serious operations, like the division of the capsule for secondary cataract.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. Frank Allport, H. V. Würdemann and J. A. Lippincott.

Treatment of Ulcers of the Leg.—Chenoweth recommends in *Med. Record* the following: "In ulcers not larger than a dollar I have the patient put the leg in hot water for an hour, then wash with soap and clean water, dry the leg, then wash with a weak formaldehyd solution, dry thoroughly and dust ulcer with boracic acid. Now I take strips of rubber adhesive plaster one-half inch wide, commence back of the toes, and apply tight, overlapping each lower strip, up to the knee, then apply an ordinary roller bandage. I allow this dressing to remain until the discharge shows through, which it will do in from five to seven days, and then the whole dressing is taken off and the ulcer cleansed as before, and a clean dressing applied. This will usually remain for about two weeks, when it is removed and the wound dressed as before. These ulcers are generally well in six weeks' time. In cases in which the ulcers are larger than a dollar, I send the patient to bed for two weeks with instructions not to get up except to empty the bowels and bladder. While in bed I have the patient use a moist dressing of one ounce of boracic acid to one quart of water. Unless the ulcer is very large, the two weeks' rest will reduce it so that it can then be treated as a small ulcer, but if two weeks is not long enough I keep the patient in bed two weeks longer, although this is very rarely required. As soon as the plasters are applied I allow the patient to follow his usual occupation. After the ulcer has entirely healed I have the patient wear an elastic stocking."

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THE BACTERIOLOGY OF EMPYEMA AND ITS BEARING ON SURGICAL TREATMENT.

Even in these enlightened days the truth that empyema is a surgical disease is not as generally recognized as it should be. The fact that a few patients have recovered after simple aspiration of purulent effusions from the pleura has apparently encouraged many physicians to wait for some time and try medical measures before deciding on operative measures. The belief seems quite general that certain purulent effusions, for example, those following pneumonia, are more likely to disappear spontaneously than are those in which some other organism is present.

Some ground for this is found in one of the first careful studies of the bacteriology of pleural exudates by Prince Ludwig Ferdinand¹ of Bavaria, who found that infections with pneumococcus run a much milder course than do those by the streptococcus, for example, and reported several spontaneous recoveries in pneumococcus empyema. Bearing on this subject the study of 135 cases of empyema treated at the Boston City Hospital during the past six years, which is reported by Withington,² is of interest. The bacteriologic examinations in this series of cases were in charge of Professor Councilman. Pneumonia preceded the empyema in the great majority of cases; 80 certainly out of 135 and probably 95 cases were preceded by this disease. The period after the onset of pneumonia when pus was first detected ranged from six to sixty-six days, and averaged twenty-five days. In spite of the fact that most of the cases followed pneumonia it seems that the *Diplococcus lanceolatus* has no distinct relation with the condition, for other organisms, specially the streptococcus, were quite as frequently present. In all the pneumococcus appeared in 60 cases and the streptococcus in 74 cases. In a number of these cases the infection was a mixed one; staphylococci, the colon bacillus, the typhoid bacillus and several others being represented in the series. Operations were performed in all but 20 cases. Of the 20 cases not operated on several seemed to be recovering, and while the exudate contained pathogenic organisms it was not markedly purulent and operation did not seem to be necessary. In other cases operation was refused. The operation performed most frequently was drainage of the pleura by incision after resection of the seventh or eighth rib. The immediate effect of operation was

to reduce the temperature and improve the general condition of the patients so that 92 left the hospital improved after an average stay of about thirty-two days. The majority of these patients were well on the way to convalescence.

From a surgical standpoint a very interesting fact brought out in these cases is that the gravity of cases with streptococcus infection does not seem to have been greater than those from infection with the pneumococcus. This is contrary to the observations of Prince Ludwig Ferdinand and several observers since the appearance of his article. On the whole, the mixed infections appeared to be more fatal than those of a single organism. Although 10 patients out of 20 in this series of 135 recovered without operation, the cases seem to have been for the most part those in which the effusion was not very definitely purulent; and even including these favorable cases, the mortality was 50 per cent., while in the cases operated on, which included some very grave cases accompanied by such conditions as abscess or gangrene of the lung, septic infections and other diseases elsewhere, the mortality was only 29 per cent. This mortality is, we believe, very much higher than after operation in ordinary uncomplicated cases of empyema. Withington states that some cases certainly recover without operation, but it is difficult to determine in advance which these will be.

It seems reasonable to conclude from this paper and from other recent observations, that whatever may be the infection operation promises the better chance for recovery. A possible exception is found in the rare cases of infection by the typhoid bacillus. Gerhardt³ reports a case in which a purulent exudate containing typhoid bacilli absorbed spontaneously, and from a careful study of the literature of the subject he finds seven other cases of infection by typhoid bacilli with recovery after simple aspiration. The cases of purulent effusion in the pleural cavity in which it is not possible to determine by reliable bacteriologic examination that the infection is with the typhoid bacillus should certainly come to early operation. If this treatment were generally adopted many lives would be saved and the extensive operations which have been devised by Estlander and Schede would be entirely unnecessary.

TYPHOID FEVER IN YOUNG CHILDREN.

About a year ago¹ we directed attention to the fact that evidence was accumulating tending to show that typhoid fever was not so rare in children as had been generally supposed. This has been still further substantiated by observations more recently published. At the last annual meeting of the American Pediatric Society the reading of papers on typhoid fever in children was followed by considerable discussion as to whether this disease ever occurs in children under two years of age.

3. *Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*, 1900, v, p. 103.

1. THE JOURNAL A. M. A., Dec. 21, 1901, p. 1681.

1. Arch. f. klin. Med., 1892, vol. 1, p. 1.

2. Boston Medical and Surgical Journal, 1902, vol. cxlvii, p. 505.

The writer of one of the papers had collected 37 or 38 cases of typhoid fever which had been reported in children under two years of age, in most of which the diagnosis was founded on the clinical symptoms, and in only about one-fifth of which the typhoid bacillus had been isolated. In the discussion several clinicians of extensive experience stated that they were not certain of having ever seen typhoid fever in infants of less than two years, and one observer, with extensive pathologic experience, stated that in the New York Foundling Asylum no case had occurred in his experience of ten years, nor in the experience of one of his colleagues in twenty years. In another place he has said that in 2,000 autopsies in the same institution there was no case with the lesions of typhoid fever. Later investigations have confirmed the opinion of those who recognized certain febrile diseases in infants as typhoid fever.

The former belief that typhoid fever must be accompanied by the usual intestinal lesions has been found to be unfounded. It is now known that infection with the typhoid bacillus may occur, the typhoid bacillus being in the blood, while the intestinal lesions are slight or absent. In such cases the diagnosis is made certain by Widal's reaction and the cultivation of the bacilli from the blood. Because of the slight development of the intestinal lesions in children as compared with adults, it was not unnatural that those who saw so little at the postmortem to correspond with their ideas of typhoid fever should have become skeptical as to whether the disease ever occurred at early ages. On the other hand, those observers who were less impressed with the pathologic anatomy, and depended on the clinical symptoms, were led to diagnosticate certain cases as typhoid fever by a process of exclusion. That typhoid fever is not actually very rare under the age of two and one-half years is again emphasized by the cases recently collected by Griffith and Ostheimer.² They have brought together 325 cases from the literature and from their personal observation. From the imperfect information in many of these cases as to the presence or absence of Widal's reaction, it is impossible to judge of its value as a diagnostic measure. It is generally believed that Widal's test is not as valuable in children as in adults; however, it seems to give positive information in a large proportion of cases, as Hand and Walker³ obtained a positive reaction in over 87 per cent. of cases, and Abt⁴ in all but two of 200 cases.

THE SURRENDER OF EDDYISM.

The latest revelation of the "profitess" of Eddyism is in effect that the public mind has not yet reached the point where Eddyite practice can control infectious diseases. Therefore, the diplomaed output of the rapid process, \$300 courses of lectures, are not to attempt any more to cure such disorders by present or absent treat-

ment. One or two recent experiences of her followers, with possible legal proceedings in prospect, may have had something to do with this latest pronouncement, but whatever the cause, it is a confession of failure and—what is still better—a chance for life for many of her deluded followers. We shall never know how many human lives have been sacrificed by Eddyism, Dowieism, etc., to say nothing of the needless disease and suffering they have caused. The same announcement authorizes and advises the reporting of contagious diseases to the proper authorities, Mrs. Eddy, or the literary syndicate of Eddyism—a great scheme, by the way—having at last interpreted the Scripture injunction to "render unto Cæsar the things that are Cæsar's" as applying to this point. It would have been better for the public if she had done this earlier, but it is well that it is done now.

It can not undo the mischief that has been done, nor is it an absolute assurance against mischief in the future. The ablest physician is not always able to certainly diagnose dangerous communicable disorders in their beginnings, but he can advise precautions while reserving his opinion. Is the Eddyite healer to be expected to be a better diagnostician or to have the modesty to refrain from meddling where he or she is—by this confession of the "profitess"—incompetent? We fear not, and there may be future tragedies as sad as those that have stirred the public in the past. It is, moreover, not in contagious or infectious diseases alone that this possibility exists; we have all heard of cases of neglected injuries, retained placenta, etc., that the most ordinary general practitioner would not have neglected, go on to fatal septicemia in Eddyite hands. Who can tell the countless hours of needless suffering and the massacres of the innocents that this Moloch has caused, and will yet cause, unless the high-charging C. S. D.'s diplomaed by Mrs. Eddy and her syndicate have the self-denial to forego their lucrative perquisites? Is there any good reason to believe that they will recognize contagion in time to prevent its spread or that the public ought to trust them to foresee the dangers that can only be properly guarded against by the earliest possible recognition? As the *New York Herald* says, the only possible safeguard for the individual and the public is to "insist that no Christian Scientist shall treat any patient unless the exact nature of the ailment has been determined, either by a competent physician or by a local health official."

There is still another aspect of this latest revelation that we can also properly notice. The whole Eddyite cult is wrapped up in its healing claims that are indicated in the title of its sacred book, "Science and Health." With the latest pronouncement the greater part of these are sacrificed at one sweep, for with the advance in medical science the list of communicable diseases is increasing daily and includes nearly all the commoner serious disorders. The range of Eddyite treatment is thus seen to be pretty seriously limited, but the most damaging effect would be naturally expected to be

2. Amer. Jour. Med. Sci., November, 1902, p. 868.

3. Amer. Jour. Med. Sci., June, 1902, p. 990.

4. Chicago Med. Recorder, Oct. 15, 1902, p. 252.

on the faith itself of its followers. As a clergyman, commenting on Mrs. Eddy's order, says:

"This, then, is the comfort given to multitudes of followers who have made an offering of lives more precious than their own, that they might be faithful to Mary Baker Eddy's teaching. Under her directions mothers and fathers have refused to permit a doctor to attend their children, and have seen them die rather than depart from the teaching that there is no infectious or contagious disease. Now they are told that there are such diseases."

Let us hope that this is the beginning of the end of the Eddyite delusion.

A HIGHER STANDARD OF ENTRANCE TO OHIO MEDICAL SCHOOLS.

The Ohio State Board of Medical Registration and Examination has still further raised the standard of minimum requirements for entrance into the medical schools of that state. At least two years of preliminary Latin study are now required and the examination includes botany or zoology, physics and chemistry as well as rather more advanced mathematics. The requirements are still none too high, but are a marked advance that it would be well if other boards could imitate. The inclusion of a certain amount of Latin study is judicious, for, say what we will, it is the best foundation for the scientific study of medicine, and though the requirements may not go far enough to insure very much classical culture, it is a step in the right direction. We are not likely to be altogether the gainers by the popular tendency of the day to reject the old courses of classical study as a leading part of an education, not even in a practical way. The graduates of the German gymnasia where the classics are taught are found to be on the whole better fitted for the later scientific courses than are those of the *Realschulen*, where the studies are more directly in the modern practical lines.

It is fortunate that the Ohio law has put into the hands of the registration board the power to regulate the preliminary requirements of the medical schools of the state. The latter may suffer for a time, and some have already succumbed, and others may, but the final result will be that an Ohio diploma will be of so much the more worth. It will be well if in future amendments to the medical practice acts similar provisions are adopted in other states and so drawn up that the standards can be raised to meet the requirements of the times, and the preliminary examinations taken, as in Ohio, entirely out of the hands of the medical schools themselves. At present there is little danger of the standard being made too high; medicine is classed as a learned profession and we should endeavor to make it more deserving of the name than it has been in the past. With all our facilities for education, free schools, high schools and universities practically free, there is no reason why any aspirant for the

medical profession should not be better prepared than is the rule at present.

It is not to be expected that any new methods will be perfect from the first, and the present defects in the Ohio system, the lack of uniformity of examinations by the different examiners, for example are only the temporary imperfections of a new machine that will be remedied by time and use. We hope there will be no backward steps and we do not fear any too enthusiastic rushing to extremes, but look to the Ohio plan—we do not call it an experiment—as one that will soon have to be generally adopted, with such modifications as experience and progress may require.

AN INDEX OF AMERICAN MEN OF SCIENCE.

Prof. J. M. Cattell of Garrison-on-Hudson, N. Y., who is compiling a biographical index of scientific men of the United States for the Carnegie Institution, asks in the November 7 issue of *Science*, for aid in that work. There are many, he says, in private life, not members of scientific societies, who have published research work of value, and he will be glad to have their names and addresses. The research work referred to must, of course, be purely scientific, but there are many medical men who have done such and the names of some of them may have escaped Professor Cattell's search. If this meets the eye of any of those who have not received his circular they will do well to inform him, giving a list or statement of their publications with their addresses so as to be duly included in the index. It will probably be ultimately published and be the standard reference authority for the names of living American men of science.

NEW YORK HOSPITAL PHYSICIANS AS PAUPERS.

The arrest in New York City, November 4, of the superintendent of the Willard Parker Hospital for Contagious Diseases, five physicians and two attendants attached to the institution, on the charge of illegal voting, was for an ingenious reason. According to the *New York Medical Journal*, "no question was raised as to the good faith of the prisoners, the point being taken by the prosecution that under the law physicians resident in hospitals who receive compensation from the city are classed as paupers and not entitled to vote." This astonishing state of affairs leads one to suspect political intrigue, rather than to believe the law to exist as stated. Anywhere but New York this would be taken as an unusually daring piece of political bluff. Our contemporary, however, is alarmed, and such phrases as "inviolable rights," "liberty is infringed upon," "deplorable tendency" and "government become a despotism" punctuate the editorial. It would be a serious matter if such disfranchisement were the lot of every city-paid physician, but it certainly need not be. If there prove to be any obstacle in the way of New York public hospital physicians, to prevent their voting, their confrères are surely able to secure its removal and to rescue these unfortunate physicians from the ranks of paupers. Why should city-paid physicians be classed as paupers any more than the city-paid mayor and police?

A NEWSPAPER FOR THE NERVOUS.

According to a cable despatch from Vienna, a newspaper for nervous persons is projected, which will handle startling occurrences in such an unexciting way as to permit sensitive individuals to keep *au courant* with the times without the needless shock liable to be produced by usual chronicles. It will be a demulcent of the day's doings, rendering them palatable to the weakest stomach. There are some perhaps who would say that we have such periodicals now, but that is intended as a slur, and not to be taken seriously. In this new organ, scare-heads, we suppose, will be tabooed, all the bad news will be broken gently, a general mild neutrality preserved on all irritating and disputed questions, wars and rumors of wars will be treated most diplomatically and all uncomfortable details of catastrophes, bank failures, etc., be scrupulously avoided. In this way the restful and unirritating environment so needed by many patients will not be broken in upon while at the same time they will not forego altogether the pleasures of enlightenment as to the world's progress. The worst thing about it, however, is the possibility of suggestion; a partial concealment or revelation is often the strongest stimulant to the imagination. The eminent usefulness of the de-horrorized and expurgated chronicle has its possible hindrances, but we wish it success.

THE LICENSING OF PROFESSOR LORENZ.

We have commended¹ the action of the Illinois State Board of Health in following the dictates of the law in requiring Dr. Lorenz of Vienna to take out a license to practice in the state. The board exercised the leniency that the law allows in not making him take a full examination and the whole process was over in an hour. This deference was a courteous action, since there was no question as to his fitness to receive a license. A Southern contemporary,² however, has the following to say: "Too great censure can not be heaped upon this board for its action in this matter." We regret to see such an anarchistic tendency in the medical press. The disregard of law is sufficiently in evidence in the land not to need encouragement from the profession. The editorial quoted says further: "Professor Lorenz acted with dignity throughout, but it is not agreeable to think what opinion of America he will take back with him." He will think better of America than would have been the case had he been allowed to practice unlicensed. American lawlessness has approached too near to the status of a byword abroad to be comfortable. Dr. Lorenz knows what would happen to an American surgeon attempting unlicensed practice in Austria. After the Professor's license had been granted here he expressed himself as not offended by the requirement and said that it was entirely proper.

WHY PROHIBITION FAILS.

The *Journal of Medicine and Science*, the official organ of the Maine Academy of Medicine and Science, and the only regular medical journal published in the state, says that prohibition does prohibit if there are

only zealous and faithful officials to enforce the law. That the law can be enforced was shown, it says, by the late sheriff of Cumberland County, and a noticeable diminution in the demands on the poor fund was an accompanying result. It quotes, further, the experience of the city of Quincy, Mass., which for twenty years has been without the open saloon. During that time it has doubled its population, tripled its valuation and increased its savings bank deposits over fourfold. All this is not so remarkable as the additional fact that while the population has doubled, the amount required for poor relief has diminished a notable per cent. This is testimony from an apparently competent witness on the ground and it must be accepted until rebutted by better. It is undeniable that we can not absolutely prevent illegal liquor selling by law any more than we can robbery and murder or less criminal acts, but this truth does not warrant the commonly repeated assertion that "prohibition does not prohibit" in the sense that it can not successfully prohibit. The trouble seems to be rather that we can not or will not often enough elect officers who, sworn to enforce the laws, will not perjure themselves. That any community is better off without the free and open sale of liquor needs no argument; it is to physicians at least an established fact that has no relations with the academic question of the consumption of alcohol in the healthy organism or that of its occasional value as a medicine in pathologic states. It is simply a question of appetite, and appetite rules, unfortunately, too much.

AN AMBITIOUS AUTHOR.

One of the most presumptuous proceedings on the part of an individual in getting a production published in a large number of medical journals is that of a Brooklyn physician. This gentleman sent us an article, which was ostensibly a protest against the use of the curette,¹ and advocating the use of an "alkaline solution." The article was neither good nor bad, just an ordinary paper, repeating old arguments and advocating nothing new. Neither did it appear to be an advertisement of anything, unless the "properly combined alkaline solution" recommended has reference to some proprietary medicine. This is possible, and if so the article would have been followed up in such a manner that there would be no misunderstanding as to what is referred to. We say "would have been," for the probability is that if there was anything of the kind intended the manufacturers of the proprietary medicine referred to will hesitate now to take advantage of the first "coup." The MS. was returned by us, not because we suspected anything, nor because it was particularly inferior. Shortly after we returned it, it appeared on the same date in two of the weeklies, and another weekly brought it to our table the next week. Immediately afterward it began to appear in monthly journals of all kinds, including homeopathic. We have now had the pleasure of seeing this remarkable production in no less than twenty-two medical journals, and the journals and the article are still coming. We wrote to the editors of a number of the journals in which the article first appeared, asking if it was

1. THE JOURNAL, October 25, p. 1054.

2. The Louisville Monthly Journal of Medicine and Surgery, November.

1. Septicemia and the Curette. By H. Plympton, M.D., Brooklyn, N. Y.

understood by them to be an original contribution, and each gave the same reply: that it came with a request for immediate publication. Each editor supposed that it was contributed to his journal only. We may be mistaken in suspecting that the article was to be utilized in pushing a certain proprietary; it is barely possible that the author merely wished to advertise himself. If this is the case, he has succeeded magnificently. It is barely possible that he may find that he has overdone the thing, especially if he had proposed to publish articles in medical journals hereafter. It is extremely likely that he will realize that he may fool the editors once, but only once.

Medical News.

CALIFORNIA.

Riverside Hospital Opens.—The new Riverside City Hospital was opened for the reception of patients, October 27.

Hospital for State University.—The University of California is considering the advisability of erecting a \$400,000 hospital in San Francisco, to be under the complete control of the medical school.

Addition to County Hospital.—The county supervisors have decided to expend \$350,000 in the erection of six new buildings for the Los Angeles County Hospital. These will include an administration building, a power house, a kitchen building, and a contagious ward and two medical buildings.

Vital Statistics of San Francisco.—In October 606 deaths occurred, equivalent to an annual death rate of 20.19 per 1000. In October, 1901, there were 566 deaths, or an annual rate of 18.86. The principal causes of death were tuberculosis 73, cancer 37, diphtheria 23, heart disease 70, Bright's disease 28, accident 32, homicide 3, and suicide 17. During the month 500 births were recorded.

CONNECTICUT.

Personal.—Dr. William J. Tracey, for nearly twelve years health officer of Norwalk, has resigned, and Dr. Henry C. Sherer has been appointed in his stead.

Infectious Diseases.—During October there were reported to the State Board of Health 220 cases of scarlet fever, 175 of diphtheria, 148 of typhoid fever, 72 of whooping cough, 36 of measles, 15 of consumption, 6 of cerebrospinal fever and 4 of smallpox.

To Establish Tuberculosis Sanitarium.—The incorporation of the New Haven County Anti-Tuberculosis Association has been consummated to establish and maintain in New Haven County a sanitarium for the treatment of curable cases and to aid all efforts put forth for the suppression and prevention of the disease.

October Deaths.—There were 1133 deaths in the state during October. This was 33 less than in September, 71 more than in October of last year, and 31 more than the average number of deaths in October for the five years preceding. The death rate was 15.9 per 1000 per annum for the large towns, for the small towns 12.2, and for the whole state 14.9. The deaths reported from infectious diseases, including diarrheal, were 283, or nearly 25 per cent. of the total mortality.

ILLINOIS.

The Kewanee Public Hospital Association has been incorporated.

Zeller Received.—Dr. George A. Zeller, superintendent of the Illinois Asylum for the Incurable Insane, Bartonville, who has recently returned from the Philippine Islands, was tendered a reception at the asylum, November 5.

Illinois State Medical Society Change of Date.—In order to accommodate itself to the date of meeting of the American Medical Association, the Illinois State Medical Society has changed the date of its annual meeting in Chicago to April 29 and 30 and May 1 and 2, 1903.

Smallpox in Evanston.—Up to November 17, 57 cases of smallpox have been reported, all except 3 among foreigners. Vaccination and revaccination have been very generally practiced. The village has arranged to send such cases as it may desire to the Isolation Hospital, Chicago.

CHICAGO.

Alexian Brothers' Hospital Benefit.—The annual benefit concert for the Alexian Brothers' Hospital netted the institution about \$5000.

Pneumonia Causes Concern.—The increase in pneumonia is causing the Health Department great concern. They call attention to the wide distribution of the germ.

Increase in Mortality.—For the week ended November 1 the death rate was 12.56 per 1000 per annum; for the week ended November 8, 13.43, and for the week ended November 15, 13.91. Last week's 486 deaths represent an increase of 10.5 per cent. over the first week and of 12.6 per cent. over the corresponding week of last year.

Cottages for Consumptives.—The commission appointed a year ago by President Hanberg of the county board to devise plans for improving the service of the Dunning institutions, recommends the abandonment of the present consumption hospital and the construction of cottages for the treatment of the disease. The commission also recommends that the incurable insane patients be separated from those suffering from temporary dementia.

Personal.—Dr. Charles Louis Mix has been appointed to the medical staff of Cook County Hospital.—Dr. Jaques Loeb has been appointed professor of physiology in the University of California.—Dr. John R. Neely has been made acting superintendent of the Cook County institutions, Dunning, pending the appointment of a successor to Superintendent Lange.—Dr. and Mrs. Frank W. Jay returned to Chicago after a year's trip abroad.—Dr. Edward B. McDowell has returned from a trip to Fiji, Samoa and Hawaii.

LOUISIANA.

The Louisiana State Board of Health, November 12, 1902, elected the following officers: Dr. C. L. Horton, medical inspector; Dr. S. G. Gill, shipping inspector; Dr. P. E. Archinard, bacteriologist; Dr. J. H. Lamb, quarantine inspector at Port Eads; Col. F. C. Zacharie, attorney.

California Censured Again.—At a meeting of the State Board of Health, November 12, resolutions were adopted censuring the California Board of Health for suppressing facts in relation to bubonic plague in San Francisco, and recommending a national conference for the purpose of adopting measures to eradicate the disease.

Charity Hospital Staff.—At the regular monthly meeting of the Board of Administrators of the Charity Hospital of New Orleans, held November 3, Dr. J. A. Danna was elected second assistant house surgeon, vice Dr. J. M. Batchelor promoted to the position of first assistant house surgeon, which vacancy had been caused by the resignation of Dr. E. D. Fenner.

Arrangements for Medical Meetings in New Orleans.—The Committee on Arrangements' subcommittee on finance of the American Medical Association held a meeting at which plans were discussed as to means of raising funds to entertain the physicians expected to be in the city at the meeting of the Association in May next.—The committee of arrangements of the American Public Health Association, which will meet here, December 8, and be in session for five days, held a meeting November 12. An elaborate program of entertainment was decided on. Dr. Clement P. Wilkinson is chairman.—Arrangements are being made for entertaining the Association of Medical Officers of the Army and Navy of the Confederacy, which will meet in this city, April 19, 1903, at the time of the United Confederate Veterans' reunion.

MAINE.

Banquet to Dr. Hunt.—After twenty-eight years of faithful service as superintendent of the Maine General Hospital, Portland, Dr. Charles O. Hunt retired a short time ago. On November 5 Dr. Hunt was given a complimentary dinner by the past medical officers of the hospital.

Personal.—Dr. Charles D. Smith, Portland, has been appointed superintendent of the Maine General Hospital, Portland, vice Dr. Charles O. Hunt, resigned.—Dr. Samuel J. Bassford, after 21 years of practice in Biddeford, has retired.—Dr. Edson E. Goodrich, Waterville, has been appointed superintendent of the Oldtown Hospital, and has moved to Bangor.

Damages Against Physician.—In the Supreme Judicial Court, Augusta, November 8, Associate Justice William P. Whitehouse presiding, the jury in the case of Leonard Barber of Manchester vs. Dr. George C. Parker, Winthrop, returned

a verdict of \$241.42 for the plaintiff. The plaintiff claimed that the defendant treated a dislocation of the right shoulder in an unskilful and careless manner and prevented the plaintiff from attending to ordinary business and caused him much suffering. The defense contended that the case was treated properly. A number of leading physicians and surgeons of the state testified for the defense. A motion for a new trial was filed.

NEBRASKA.

Creighton Medical College, Omaha, opened for the year with 165 students, of whom 55 belong to the freshman class.

Medical Library Transferred.—The library of the State Medical Society, numbering about one thousand volumes, has been transferred to the Lincoln library.

Corporation Not a Practitioner.—A corporation can not collect money for services as a physician. So it was ruled by Judge Stubbs at Omaha November 15 in the case of the State Electro-Medical Institute against L. N. Platner. Suit was brought to recover \$75. Judgment was obtained in the justice courts. The case was appealed and the finding reversed, because, as a corporation can not practice medicine under the state laws, it can not collect for its services.

NEW YORK.

Smallpox in Rochester.—There are now 33 cases of smallpox at the Hope Hospital, Rochester, N. Y.

Death Rate of Large Cities.—Of the twelve cities of 5,000 population or more, Schenectady has the lowest annual death rate—12.3 per 1,000. Elmira has a death rate of 13; Syracuse, Buffalo and Rochester, 14; Albany, 15.2; New York, 7; Troy, 17.5; Binghamton, 18.5; Newburgh, 18.6; Auburn, 0, and Yonkers, 21.5.

Site for New State Hospital.—Members of the State Lunacy Commission spent a few days inspecting sites for the proposed new state hospital for northern New York. It has practically been determined that the new institution shall be located in Washington County. Comstock's, Smith's Basin, Ialem, Greenwich and Hartford were visited. The next legislature will be asked to make an appropriation for the new hospital.

Buffalo.

Unclean Barbers Convicted.—As a result of a concerted action by the health department inspectors and the union of the Buffalo barbers, eight Italian barbers were convicted in the municipal court of violating the city ordinances regulating the management of barber shops. The complaint in each case was that the barbers have been using one towel to every two or three customers, where the ordinance provides that each customer shall have a clean towel.

Comparative Mortality.—The last monthly statement issued by the Bureau of Vital Statistics shows 393 deaths in October as compared with 431 in October, 1901, a decrease of 38. Taking the death roll month by month since the first of the year and comparing it with the corresponding months last year it is found that there was a decrease in each month except March and April. The total for the ten months shows a decrease of 152 deaths from the number reported for the first ten months of last year.

New York City.

New Superintendent for Bellevue.—Dr. William Mabon, Ogdensburg, superintendent of the St. Lawrence State Hospital for the Insane, has been appointed Superintendent of Bellevue Hospital, New York.

Dr. Whitmore Arrested.—Dr. B. T. Whitmore, the eastern representative of Parke, Davis & Co., was arrested, last week, on the charge of obtaining money by extortion from the Water Front Improvement Company.

Health Officer Doty To Be Reappointed.—It is said that the governor has already decided to reappoint Dr. Alvah H. Doty health officer of the port of New York. Dr. Doty has served in that capacity since his appointment by Governor Morton in 1895.

Medical Laboratory Suit vs. New York University.—The Appellate Division of the Supreme Court has just handed down a judgment decreeing the return to the medical college laboratory of certain property held in trust by the New York University. The property, which is valued at \$150,000, was transferred to the university in 1897, but for several years there has been litigation over it, the contention being that the university has been guilty of a breach of trust.

Popular Lectures on Consumption.—As a part of the systematic campaign of education to be conducted by the Charity Organization Society, it has been decided to have monthly lectures on the nature of consumption and the means of preventing its spread delivered at night in the public schools. These lectures are to be in various languages so as to be understood by the denizens of the lower East Side. In connection with this announcement, the statement is made that more than 50 per cent. of the deaths among negroes in this city are due to tuberculosis.

Personal.—Dr. Frederick Holme Wiggin has been appointed visiting surgeon to the City Hospital.—Dr. Wisner R. Townsend has been appointed to the vacancy on the committee on union of the New York State Medical Association left by the election of Dr. Frederick Holme Wiggin as president of the association. Dr. Wiggin is a member ex-officio of this committee.—Drs. Guy Brewster and Gertrude Light, as a result of competitive examination, have been appointed sanitary inspectors.—Dr. H. Beckman Delatour has been appointed surgeon-in-chief of the ambulance service of Brooklyn.

New Hospital Island for Immigrants with Contagious Diseases.—President Lederle of the Board of Health announces that progress is being made in the plan to build a new island in New York Harbor between Ellis and Liberty islands on which to build a hospital for the care of immigrants suffering from contagious diseases. Last September President Lederle notified Commissioner Williams that the Department of Health would terminate the agreement by which the city cares for cases of contagious diseases among the immigrants at this port. The department will take care of these cases, however, until the Government has provided accommodations for them.

OHIO.

Dinner to Dr. Gallagher.—The Alumni Association of Ex-Internes of St. Alexis Hospital, Cleveland, gave a dinner November 6, in honor of its president, Dr. John V. Gallagher, who has recently returned from abroad.

Smallpox Diminishing.—For the week ended October 11, there were reported to the State Board of Health 84 cases in 21 locations in 18 counties; for the week ended October 18, there were 73 cases in 18 locations in 17 counties, and for the week ended October 25 there were 75 cases in 20 locations in 14 counties.

Personal.—Dr. Samuel C. Lindsay, late acting assistant-surgeon, U. S. Army, has returned from the Philippines to his home in Salineville.—Dr. Raymond C. Whalen will return from Manila and resume his practice in Youngstown, in February next.—Dr. Earl E. Gaver, Columbus, has been appointed assistant physician at the Columbus State Hospital for the Insane.

True Bills Returned.—In the cases of Drs. Charles F. Cooke and Asa E. Hoskinson, Columbus, whose licenses to practice were revoked by the State Board of Medical Registration and Examination, as noted in THE JOURNAL of October 7, the grand jury found indictments October 23, on the charge of having attempted a criminal operation on a young woman, who died later from sepsis. Both the accused were released on bonds.

Tuberculosis Commission Meets.—The State Tuberculosis Commission met in Columbus, November 10, and organized by electing Hon. Joseph H. Outhwaite president, and J. Warren Smith secretary. The other members present were Dr. Charles Slocum, Max Senior and S. S. Knabenshue. The commission discussed its duties in a general way and decided to present to the legislature papers on the following subjects:

"What Is Tuberculosis? Its Prevention and Curability, Including the Sanatoria Treatment," by Dr. Charles E. Slocum, Defiance.
"History and Records of Sanatoria, Both Foreign and Domestic, with Comparative Climatology Thereof," by Dr. George C. Ashmun, Cleveland.

"Economic Waste Resulting from Tuberculosis as Shown by Reports of Hospitals, Orphan Asylums, Jails, Charitable Associations and Fraternal Societies," by Mr. Max Senior.

"The Climate of Ohio as It Relates to the Location of Sanatoria," by Mr. J. Warren Smith.

"The Sanitarium: Size, Plans, Cost, Situation and Administration Expenses," by Mr. S. S. Knabenshue.

PENNSYLVANIA.

Internes Aggrieved.—Seven resident physicians of Mercer Hospital, Pittsburg, resigned, November 7, on account of dissatisfaction at the work required of them by the attending staff.

Smallpox at Erie.—There are a number of cases of smallpox at Erie. Dr. Chester Stranahan, one of the prominent physicians of the city, has been stricken with the disease.

State Hospital for Epileptics.—The Pennsylvania State Convention of the Directors of the Poor, at a recent meeting in Somerset, recommended the purchase of Highland Inn and 100 acres of land for the establishment of a state hospital for epileptics.

Examination of Judges for Retirement.—The last legislature passed an act authorizing the governor to appoint medical commissioners to inquire into the mental and physical condition of judges, with a view of having those incapacitated retire on half-pay for the remainder of their terms. Governor Stone proposes to go over the entire judicial list, and wherever he finds a judge who has not been able to perform his judicial functions for a year or more, he will appoint a commission to examine him and report the result. On such a commission the governor has appointed Drs. John V. Shoemaker, Philadelphia; Alexander G. Fell, Wilkesbarre, and William K. Dolan, Scranton.

Philadelphia.

The Mutter lecture on surgical pathology will be delivered at the College of Physicians, December 2, by Major Louis A. La Garde, surgeon, U. S. Army, on "Poisoned Wounds by the Implements of Warfare."

The Welch Reception.—On November 14 at the Hotel Bellevue a reception was given by the Medical Club of Philadelphia in honor of Dr. William M. Welch, president of the State Medical Society of Pennsylvania.

Hospital Bequests.—By the will of Raphael Teller, legacies of \$500 each are made to the Jewish Hospital Association, and the Jewish Foster Home and Orphan Asylum. The will of Eliza G. Landreth, Philadelphia, provides that on the death of certain persons named \$5000 shall revert to St. Luke's Hospital of New York for the endowment of a free bed; that \$3000 is to revert to the West Philadelphia Hospital for Women, and that \$5000 shall go to the Episcopal Hospital to endow a free bed.

Suicide Increasing.—The coroner's report shows that in 1901 there were 153 suicides in Philadelphia, a rate of 12 to 100,000 population. In 1890 the rate was 9.1 to 100,000. This increase in the number of suicides is general throughout the country. Good authority states that in 1890, in 50 of the largest cities of the United States, the average number of suicides was 12 per 100,000 of population, while in 1901 it was 16.

Cripples for Lorenz.—Hundreds of cripples of various sorts have applied for treatment by Dr. Lorenz, at the clinic which he is soon to hold in Jefferson Medical College Hospital. From the large list of applicants 20 cases of congenital dislocation of the hip have been selected, and careful study made, including skiagrams. From this score of cases Dr. Lorenz will make his own selection for operation. The Medical Club of Philadelphia will give a reception in his honor.

Typhoid Epidemic.—Typhoid fever may be said to have reached an epidemic condition, and is still on the increase. The official record for the week ended November 15 is: deaths, 10; new cases, 148; as against 8 deaths and 124 new cases for the previous week. There are probably 800 cases under treatment in the city. The health authorities have not determined the source of infection. Portions of the city supplied with filtered water seem affected equally with those not so supplied.

Site for City Institutions.—It is stated on good authority that the subcommittee of City Councils' committee on city property are negotiating for a tract of 267 acres of land in the Fortieth ward, to be used as a site for a hospital for the insane, an almshouse, and a hospital for contagious diseases. The plan, generally favored, is to remove the insane and almshouse department from their present location at Blockley and on the latter site to remodel and build an institution for purely hospital purposes. This will include the erection of several fine steel and glass isolated pavilions for consumptives. There are now in the insane department of the Philadelphia Hospital 1300 inmates, and 1800 more are scattered in institutions throughout the state. It is proposed to provide accommodation for all of these in the new institution.

GENERAL.

Cholera Again Among Soldiers.—Another small development of cholera in the Army in the Philippines is reported from the Fifth Infantry, who are on guard over Manila's water supply. Nineteen cases were reported November 13, of whom 7 had died.

Leprosy Statistics in the Philippines.—The cases of leprosy reported as existing in the various provinces of the Philippines number 3,063. The number of male lepers is nearly double

that of the females, 2,092 cases are adults and 171 children; of the total number of victims 1,097 are married. The vast majority of cases are among members of the Filipino races. In the city of Manila there was only one death from leprosy in May. The report of the chief surgeon at Manila, just received at the war department, says:

Leprosy is found generally throughout the islands, probably more in the Vizayas than elsewhere. At the request of the commissioner of public health medical officers of the Army searched for and reported many cases during the year. From their reports it appears that former estimates of the number of cases of this disease were placed at too high a figure, as nothing approaching 30,000 sufferers was found. Reports were, however, incomplete, as numerous places were not visited.

The proposed leper colony is much feared by the people, thus leading to concealment of cases, and without careful study, which was not practicable, early leprosy is overlooked. No cases have appeared in soldiers, as might be expected in view of the supposedly long period of incubation. The leper colony for natives has not yet been established.

Dissatisfaction of Naval Surgeons.—Surgeon-General Rixey, in his annual report of the condition of affairs in the Medical Corps of the Navy, refers thus to the complaints that the prospect of promotion is too meager, the work too hard and the pay too small:

Hospitals with twice as many patients as in 1897 have fewer surgeons, vessels at sea have had their quota of medical officers cut down one-third or one half, and important shore stations must depend on the partial training of a pharmacist.

The hope entertained by young medical officers just entering the service for future distinction has been so little realized, however, that the resignations in 1901 numbered nearly one-fourth of the entries into service in the same period. The reasons leading up to these resignations could be traced to dissatisfaction with the opportunities for purely professional work and advancement offered by a Service overworked and undermanned.

New Semi-Military Medical Corps.—A bill has been drawn up in the interests of the volunteer and contract surgeons now in service in the Philippines providing for a semi-military medical corps analogous to the British Indian Medical Service, in which the officers are given military titles and rank. The organization as proposed is to consist of one assistant surgeon-general with the rank of colonel, four deputy surgeons-general, with the rank of lieutenant-colonel, forty surgeons with the rank of major, and one hundred assistant-surgeons with the rank of captain and first lieutenant (mounted). The pay and allowances to be the same as those of corresponding ranks in the regular army. In the original organization the assistant surgeon-general, two of the deputy surgeons-general and two of the surgeons are to be appointed from the regular medical corps of the Army, the remainder to be from the volunteer and contract surgeons who have had not less than one year in tropical service. All are to be appointed after examination, due credit being given previous service. All original vacancies remaining twelve months after the bill becomes a law are to be filled similarly to those in the regular Army medical service. The provisions as regards promotion, leave of absence, retirement, court martial, etc., are provided for, the service, while similar in functions to that of the Army, is strictly distinct, and when detailed to act under the civil authorities it is independent of military jurisdiction and subject only to the orders of the civil authorities and those of the Secretary of War. It is claimed that this bill will be a relief to the medical corps of the Army, and do away with the present temporary, unsatisfactory and expensive employment of volunteer and contract surgeons, beside abolishing the injustice of the present system to deserving officers of these classes.

CANADA.

A New Hospital.—The Ross Memorial Hospital, the gift of James Ross of Montreal, was formally opened at Lindsay, Ont., November 20. The hospital is a handsome structure consisting of a main building, and two wings, and has been donated to the town by Mr. Ross in commemoration of his mother.

Children's Hospital for Montreal.—It is intended that in the near future a hospital shall be erected in Montreal for the reception of children of eastern Canada suffering from such diseases as tuberculosis or deformities of the limbs or spine. The hospital may be called "The Children's Memorial Hospital to Queen Victoria," and will be built on Mount Royal or in the country immediately adjacent to the city.

Montreal Maternity Hospital.—The fifty-eighth annual meeting of the Montreal Maternity Hospital was held last week with Dr. T. G. Roddick in the chair. Mrs. James Ross has donated \$1000 to the hospital. A new building has been decided on, to cost \$100,000. The treasurer's report showed a balance of over \$5000; 239 patients were treated during the past hospital year, and only three deaths occurred; \$65,000 has already been collected for the building fund of the new hos-

pital and \$25,000 has been expended for the purchase of the site.

No Sanitarium By-Law for Toronto.—The Board of Health of Toronto has put an end to the hopes of the Anti-Consumption League for the submission of a by-law to the ratepayers for a municipal grant of \$50,000, with which to inaugurate a fund for the establishment of a free sanitarium within twelve miles of the city. The meeting of the board was addressed by Dr. Sheard, the medical health officer, who said Toronto was in a very much better position with regard to the treatment of consumption than it was a year ago. No bedridden consumptive would now be refused admission to a hospital, and since June 9 the Gravenhurst Sanitarium has received from the city twenty-seven incipient cases, for which the city was paying forty cents a day each.

Ontario Medical Council Matriculation.—For some time the medical students have been complaining that the standard of the matriculation examination in the Ontario College of Physicians and Surgeons was altogether too high. Members of the Medical Faculty in Toronto University have taken up the matter with the government, with the result that the Minister of Education will take steps to secure a settlement of the difficulty. The trouble seems to have been caused by the indefinite wording of a clause in the regulations which read: "He has passed the examination conducted by the Education Department of Ontario of the course prescribed for honor matriculation in arts, chemistry and physics." It is stated that so seldom does any candidate take honors in all subjects prescribed for this course, that students of medicine would be so limited as to almost make the examination prohibitory.

FOREIGN.

Scandinavian Journal of Therapeutics.—The foundation of the *Nordisk Tidsskrift for Terapi* is announced from Copenhagen. Dr. Marius Lauritzen is the editor, with the collaboration of prominent internists of the Scandinavian countries. It is to be published monthly by the Gyldendalske Boghandels Forlag.

Memorial Tablet to Kussmaul.—Czerny is the son-in-law of the recently-deceased German clinician Kussmaul. He has had the house at Kanderndorf where Kussmaul used to live marked with a tablet stating: "Adolf Kussmaul, later professor at Erlangen, Heidelberg, Freiburg and Strassburg, practiced here, 1850-1853."

Renewal of Opium Prescription by Druggist.—The German courts have recently fined a druggist \$50, and his assistant \$14, on account of the fact that they dispensed a prescription calling for opium, and renewed it about two thousand times for the same purchaser. The courts held that they should have consulted with the physician, the author of the prescription, before dispensing it an unusual number of times.

Golgi's Silver Jubilee.—The twenty-fifth anniversary of his entrance on his professional career was celebrated October 28, by the friends of Professor Golgi at Pavia. An *édition de luxe* of his own works in three large volumes was presented to the illustrious anatomist in the presence of a large gathering of noted scientists and statesmen, including Kölliker, who came from Würzburg to congratulate his old friend. Golgi is now in his eighty-sixth year and in the best of health.

Esmarch's Eightieth Birthday.—All wishing to contribute to the testimonial in honor of Frederick von Esmarch, the renowned German surgeon, whose name is so immortally connected with the care of the wounded on the battlefield, are asked to send their communications to the bank at Kiel or Tönning. The latter is his birthplace, and his friends are planning a celebration there Jan. 9, 1903. Contributions should be addressed to the Reichsbankhauptstelle, Kiel, or to the Städtische Spar- und Leihkasse at Tönning. Von Esmarch married the aunt of Kaiser Wilhelm and he has been the recipient of honors of all kinds at home and abroad.

LONDON LETTER.

The Disuse of Splints in Colles' Fracture.

At the Polyclinic Mr. Jonathan Hutchinson insisted that the ordinary treatment of Colles' fracture by splints is injurious. He contended that the carpal fragment is very short and usually can not be influenced by attempts at extension, and that when there is not firm impaction the broad surfaces of the broken bones lock them together so that subsequent movement is impossible. He insisted that the attempt to press fragments of broken bone into place by pads or splints is bad practice, and certain to result in stiffening from adhesions. These conclusions were arrived at many years ago by Mr. Hutchinson,

and they have been confirmed by radiography. A study of the valuable series of radiographs of Colles' fracture exhibited by Mr. Robert Jones of Liverpool at the recent meeting of the British Medical Association, did not reveal a single case in which advantage could have resulted from the use of splints. In the majority the displacement of the carpal fragment was insignificant, and no advantage could accrue from attempts to rectify it. In some there was no displacement. In the minority the displacement was inconsiderable, and rectification impossible. Mr. Hutchinson showed a case treated without splints, in which the patient could use her arm after a month, and although there was some displacement there was no stiffening. A radiograph of another case was shown in which there was deep impaction which could not have been remedied by splints. Here the treatment was a plaster-of-paris splint for 5 weeks, massage for a month, and breaking down of adhesions under chloroform. At the end of three months the condition was unsatisfactory. Mr. Hutchinson advocates this treatment only for Colles' fracture—fracture through the expanded carpal end of the radius. In fractures higher up splints may be necessary. But unless the ulna is also broken a splint is not usually necessary, for no great amount of shortening or lateral displacement can occur. His advice is: when there is displacement which can be removed by extension and returns when extension is remitted use a splint, not otherwise.

The Plague-Pandemic.

The Local Government Board has published a thick volume of reports and papers on bubonic plague by Dr. R. Bruce Low. During the three years dealt with in Dr. Low's report, plague has become widespread, and has extended to every continent. Not until the wave has once more receded and opportunity has been thus afforded for weighing all the facts now being accumulated throughout the world can the epidemiologic, administrative, or other lessons to be learned from it be summarized. The records to which Dr. Low has had access, though they go to confirm belief that as regards plague man and the rat are reciprocally infective, do not afford sufficient data for determining the degree to which man is in danger through the rat. So far as plague ashore is concerned, it appears that in some localities man and the rat suffered from plague coincidentally; that in others man suffered before the rat; and that in others the rat suffered before man. When in a particular district the one (man or the rat) has suffered plague antecedently to the other, the interval between invasion of the first and of the second species has been often variable, extending sometimes over weeks and months. Plague may prevail largely among men without rats becoming conspicuously affected, and conversely, the disease may cause large mortality among rats of a locality while exempting man. As regards plague on shipboard similar facts were forthcoming. The disease does not, under conditions of sea transit, appear to be at all readily conveyed from the rat to man or from man to the rat.

Plague and Cholera in India.

Since the autumn of 1896 plague has been epidemic in India. Official reports fall far short of the actual mortality, but it is known that during the period from September, 1896, to the end of June, 1901, there were 659,864 attacks and 525,401 deaths in the population, which in 1891 was 287,317,048. Cholera is regarded with far less fear than plague, though the ravages of the former disease far exceed those of the latter. The total deaths recorded from cholera for the years 1896, 1897, 1898, 1899 and 1900, were 2,148,149, while those from plague were 403,671.

Herpes Zoster of the Third and Fourth Cervical Distribution with Facial Paralysis.

Dr. A. Stanley Barnes showed a case of this rare condition at the Clinical Society. The patient was a man aged 40 years. On Sept. 30, 1902, he was exposed to cold, and next day noticed a few "pimples" on the right side of his neck. By October 3 the herpetic rash was fully out, but he had no pain. He continued at work, but on the 8th he found that the right side of his face was paralyzed. On admission to hospital next day there was a profuse herpetic rash over the third and fourth cervical distribution on the right side and the skin was slightly analgesic. There was no pain. There was complete right facial palsy. The electrical reactions were normal. Taste was lost on the right side of the tongue, front and back, but was preserved on the left side. There was some dulling of the sense of hearing, especially of the higher musical notes on the right side. By the 22d the rash had dried up and the facial paralysis was improving, the frontalis and platysma particularly showing signs of returning voluntary movement.

Post-Graduate Teaching in London.

The Associated Schools of Medicine in London for post-graduate teaching are issuing joint cards admitting to the clinical instruction of the following metropolitan hospitals and schools of medicine: Charing Cross, Guy's, King's College, Middlesex, St. Bartholomew's, St. George's, St. Mary's, St. Thomas' University College, and Westminster. The following special hospitals are also included in the scheme: the Brompton Hospital for Diseases of the Chest; the Hospital for Sick Children, Great Ormond Street; the London School of Tropical Medicine; the National Hospital for the Paralyzed and Epileptic, and the Royal London Ophthalmic Hospital. The cards will be available for qualified medical men, British, colonial or foreign; they are nontransferable, must bear the signature of the holder, and must be shown when required to the authorities of the schools or hospitals visited. They will admit the holder to hospital practice, but not to classes preparatory to any examination. The cards will be issued on personal application and on evidence of qualification being furnished between the hours of 12:30 and 3 p. m. any week day except Saturday, at the office of the Metropolitan Schools of Medicine, West Wing Examination Hall, Victoria Embankment, W. C. A card for three months costs \$35, one for six months \$50, with a further fee of \$25 for each additional six months.

PARIS LETTER.

The Recent Change in the Treatment of Appendicitis.

Two years ago the majority of surgeons in France were inclined to operate immediately on most cases of appendicitis, and this tendency was due to Professor Dieulafoy, who declares that no one should die of appendicitis and that an immediate operation is the only safeguard for a patient. A certain number of surgeons still cling to this formula, but they are generally found among the younger men, who perhaps lack the moderation and judgment that are apt to come with advancing years. A cursory glance through the medical literature that has appeared during the last two months demonstrates how diverse the opinions of some well-known men are, and how convinced they are that their opinion is surely unassailable. Dr. Savariaud, a surgeon who has just obtained a position in the hospitals, is firmly convinced that all the arguments of the "opportunistic school" can be readily laid aside. Operating on a patient who is suffering from an attack of appendicitis could in no wise hasten or cause his death, the disturbance caused by the surgical intervention in the natural formation of a localized abscess is of slight account, the false membranes already in existence can be removed, provided sufficient drainage is insured, post-operative hernias are more the result of faulty technique than of incising the abdominal wall at such a time, and, in short, not one single argument can, according to Savariaud, justify procrastination. Such statements are now, however, made much less frequently, and contrast singularly with the moderate statements made last September at the surgical congress at Brussels. The latter meeting presented a certain international character, as numerous invitations had been sent to the most important surgeons of other countries. Dr. Broca, surgeon of the new Trousseau Hospital for Children, gave a synopsis of his statistics since 1892, which proved instructive. For three years he considered it expedient to operate on all cases, with very few exceptions, and the mortality was 33 per cent. Out of 79 cases of appendicitis 7 were left untouched, 8 operated on after the attack, and 64 "*à chaud*," as it is called in French, with 26 deaths. His death rate in 1896 was 13.33 per cent., and only 10.85 per cent. in 1897, 1898 and 1899. One great trouble, as Broca well remarks, is that patients are purged two or three times by the physician, and the result is bad, if not fatal. It can hardly be said that the improvement shown in 1896, 1897, 1898 and 1899 was due to improved technique, but rather to his habit of temporizing. His colleague at the Trousseau Hospital, Dr. Kirmisson, had tried the immediate operation, with the result that he had 50 per cent. of deaths. He then turned to his former practice. If the operation could be performed the very first day the patient falls ill, there would be little danger of a fatal result, but it is generally only the third or fourth day that the physician calls the surgeon, and this injudicious treatment may sometimes have brought about disastrous results. Then there is the danger of operating and finding no disease of the appendix. One of the most reliable surgeons in Paris told me recently the history of a case, which showed how disastrous this might be for the surgeon. A surgeon with a world-wide reputation was called in to see an American suffering presumably from appendicitis. She was operated on, and on the appendix being removed her husband asked to have it handed to him. He proceeded to

send it to London, to be examined as to its pathology, and the reply was that there was no appreciable lesion. Such mistakes are not so very uncommon, neuralgia of the ovary, for instance, being taken for appendicitis. According to Monprofit, who spoke at the congress of surgery, the operation for appendicitis has gone through the same phases as that for salpingitis, and surgeons are getting more reserved.

Bonnaire's Treatment of Galactophoritis.

Dr. Bonnaire, a well-known accoucheur of the Paris hospitals, has been advocating the use of ice in the treatment of galactophoritis, and considers it more advantageous than the treatment recommended by Budin, which consists in removing the milk and pus by expression. The technic is as follows: the breast is washed carefully with an antiseptic solution, and then covered with a dressing dipped in a solution of corrosive sublimate or nitrate of silver in case there are any fissures. Over this should be placed a strip of flannel and then a rubber bag filled with chopped-up ice. The whole is kept in place by means of a piece of oil-silk and a bandage. When the inflammation has gone down, some milk should be drawn off to see if there is still any pus.

Post-Graduate Course in France.

The system of having post-graduate courses during the summer months seems to be at last established in Paris. During the month of October there were 10 different courses on ophthalmology, stomach troubles, laryngology, urinary diseases, massage, dermatology, electrotherapy, practical surgery, gynecology, mental diseases and practical therapeutics. Each course cost only 20 francs, which is certainly not expensive.

The Gynecological Congress in Rome.

At the congress of gynecology, held in Rome last September, it was a noteworthy fact that there were more physicians of French than of any other nationality. The subjects most thoroughly discussed were the use of abortion as a therapeutic measure, and the treatment of puerperal infection by hysterectomy. Professor Treub of Amsterdam made some remarks about the prudence shown by most of the surgeons present, and said that even American surgeons, who had a reputation for being audacious, had refrained from recommending this operation over much. In his report on the subject he had spoken of Dr. Rochard's opinion that in all cases of severe infection the operation should be performed when the patient's life is in danger. Further on he had said that Dr. Rochard's remark that since the adnexa were removed even when there was no immediate danger, surely it might be claimed advisable to remove the uterus, when the patient's life hung in the balance. Dr. Rochard was not at the congress, but sent an open letter to Professor Treub, which was published in the *Presse Medicale*. He spoke of Professor Terrier's opinion, which is as follows: "In grave forms of puerperal infection, total hysterectomy seems to me to be thoroughly indicated." Dr. Rochard has operated on six cases for puerperal infection when called in by an accoucheur, and he remarks that he could not very well remain inactive under such conditions.

Pozzi's Report on Cancer of the Uterus.

The treatment of cancer of the uterus was the subject of a report by Dr. Pozzi at the Rome congress. He insisted on the importance there was in distinguishing the various forms, those seen in young women being apt to be much more serious and run a more rapid course. Even the temperament of the patient was of some importance. Cancer of the body of the uterus is found more frequently than was at first imagined, statistics such as those of Tesson (1902) showing that the proportion was from one in four to one in ten. His own experience, however, did not carry this out. He had seen 214 cases of cancer and only 6 of them were of the body of the uterus. This variety of cancer does not spread so rapidly, and is generally seen in women who are past 55 or 60. It does not recur so readily. Three patients of Lauwers remained cured. Boissier had the same result; Steinbach reports 23 cases, out of which 13 remained cured after three or four years, and Winter has obtained 30 observations with only 16 cures after five years. This is far from being the case with cancer of the cervix. Burkhardt's researches show that only 26 per cent. of the cases seen can be operated on with some chance of success. During the last eleven years at Broca Hospital, only 80 out of 210 cases were such as to render hysterectomy justifiable. When the uterus can no longer be moved easily surgeons in France abstain from operating, and Pozzi's formula is that the importance of the operation should be in inverse ratio to the size and connections of the tumor. The complete operation, such as it is, practiced by Wertheim, Mackenrodt, and

Schauta does not find favor with Pozzi, though it was carried out two or three weeks ago in his service by Jonnesco of Bucharest. The importance of removing the glands seems to have been exaggerated, as they are rarely a cause of serious complications or death, which is generally due to hemorrhage, chronic septicemia or uremia.

Correspondence.

Use of Alcohol—An Appeal to Physicians.

HARTFORD, CONN., Nov. 6, 1902.

To the Editor:—It is a fact not often recognized that the medical profession as a body have during the last half century made three distinct declarations concerning the nature and effects of alcohol on the body. These declarations grew out of a sense of alarm at the dangerous use of alcohol and the need of a protest by medical men acting independently. The first was made in 1839, and was signed by 78 leading physicians in London, Edinburgh and Glasgow. It was a public statement declaring the use of alcohol as a food and beverage to be injurious and pointing out its damage to the body. The second declaration appeared in 1847 and declared that alcohol was not needed in health and that total abstinence gave the strongest promise of longevity. This declaration was signed by 2,000 physicians in England, on the continent and in this country. The third declaration appeared in 1871, and while reaffirming the statements of the former manifestos declared alcohol to be a poison and a most powerful drug, and one that should not be used except by physicians and with care and caution. This was signed by over 4,000 physicians, including some of the leading men in every part of the world. The names of thirty American physicians appeared on this role. A fourth manifesto or declaration of opinions has been projected and is now being circulated for signatures among leading physicians in every civilized country. The following is the text of this declaration:

The purpose of this manifesto is to have a general agreement of opinions of all prominent physicians in civilized countries concerning the dangers from alcohol, and in this way give support to the efforts made to check and prevent the evils from this source.

In view of the terrible evils which have resulted from the consumption of alcohol, evils which in many parts of the world are rapidly increasing, we, members of the medical profession, feel it to be our duty, as being in some sense the guardians of the public health, to speak plainly of the nature of alcohol, and of the injury to the individual and the danger to the community which arise from the prevalent use of intoxicating liquors as beverages.

We think it ought to be known by all that:

1. Experiments have demonstrated that even a small quantity of alcoholic liquor, either immediately or after a short time, prevents perfect mental action, and interferes with the functions of the cells and tissues of the body, impairing self-control by producing progressive paralysis of the judgment and of the will; and having other markedly injurious effects. Hence alcohol must be regarded as a poison, and ought not to be classed among foods.

2. Observation establishes the fact that a moderate use of alcoholic liquors, continued over a number of years, produces a gradual deterioration of the tissues of the body, and hastens the changes which old age brings, thus increasing the average liability to disease (especially to infectious disease), and shortening the duration of life.

3. Total abstinence, other conditions being similar, can perform more work, possess greater powers of endurance, have on the average less sickness, and recover more quickly than non-abstinence, especially from infectious diseases, while they altogether escape diseases specially caused by alcohol.

4. All the bodily functions of a man, as of every other animal, are best performed in the absence of alcohol, and any supposed experience to the contrary is founded on delusion, a result of the action of alcohol on the nerve centers.

5. Further, alcohol tends to produce in the offspring of drinkers an unstable nervous system, lowering them mentally, morally and physically. Thus deterioration of the race threatens us, and this is likely to be greatly accelerated by the alarming increase of drinking among women, who have hitherto been little addicted to this vice. Since the mothers of the coming generation are thus involved the importance and danger of this increase can not be exaggerated.

Seeing, then, that the common use of alcoholic beverages is always and everywhere followed, sooner or later, by moral, physical and social results of a most serious and threatening character, and that it is the cause, direct or indirect, of a very large proportion of the poverty, suffering, vice, crime, lunacy, disease and death, not only in the case of those who take such beverages, but in the case of those who are unavoidably associated with them, we feel warranted, nay, compelled to urge the general adoption of total abstinence from all intoxicating liquors as beverages as the surest, simplest, and quickest method of removing the evils which necessarily result from their use. Such a course is not only universally safe, but it is also natural.

We believe that such an era of health, happiness, and prosperity would be inaugurated thereby that many of the social problems of the present age would be solved.

This has already received the signatures of over 1,000 physicians, principally in England, Germany and France. Its

importance and practical value as a statement of the experience and judgment of the leading physicians of the world outside of all associations and as scientific men can not be overrated. This declaration with its signatures is to be published and circulated in the early part of the coming year and will have a historic interest as indicating medical sentiment at the beginning of the century and giving assistance to the efforts made to correct public sentiment and assist in the prevention of the evils which follow from the indiscriminate use of alcohol. I have been asked to solicit signatures to this manifesto from leading American physicians. The matter is a purely scientific one, and the signature of each physician stands not only for himself personally, but as a representative thinker and student in a cause, the solution of which would be of great interest in the future. I should be very glad to receive the names, titles and addresses of any physician who is willing to aid in making this a distinctive movement for the benefit of the world. American physicians should be equally enthusiastic and prompt to lend their signatures as those in the wine-drinking countries of Europe. A postal card, giving the address and titles, is earnestly solicited from every physician who would like to be represented in this last great movement to correct and help overcome one of the great evils of the age.

T. D. CROTHERS, M.D.

Methods for Prevention of Tubercular Infection at Mount St. Rose Sanatorium.

ST. LOUIS, Nov. 8, 1902.

To the Editor:—In the new sanatorium for tuberculosis in St. Louis, the greatest care is taken to prevent infection and the spread of the disease. As some of the methods employed are not in general use, I may be pardoned for mentioning them.

Recognizing that the greatest danger of transmission is conveyance by eating utensils, clothing and the sputum, these vehicles receive special attention. All dishes when carried from the patients' table are at once placed in boiling water in a large, closed vessel kept for this purpose only, and boiled. When patients are admitted, all outer clothing is put into a tight clothespress and thoroughly fumigated, as is also done at intervals. In case of death, all such apparel is fumigated before it is given to the relatives. All underclothing, sheets, towels, etc., before being taken to the laundry, are placed in a steam-box where, under pressure of not less than 100 lbs., they are exposed to superheated steam for 20 minutes and then boiled in one division of the laundry-room. As bacilli are destroyed at less than 170, this seems sufficient.

The care of the sputum is as thorough as possible. To prevent the carrying of bacilli by flies all the cups and cuspidors are kept covered and emptied frequently. No possible excuse is made for any patient expectorating on the floors, verandas or grounds. In place of the ordinarily used germicides, the concentrated lye of the shops (crude hydrate of potash) is used. It has the advantage of being cheap, odorless and thoroughly dissolving the masses of sputum, saponifying necrotic tissue and destroying every particle of germ life. The cuspidors are specially made for the hospital. They are of iron and in two pieces. The lid is easily removed, being held in place by a plain socket and lifted by a pedal. It falls in place by gravity. The box of the cuspidor is plain and square, but with rounded corners. It rests on four small projections or feet, which are perforated in the horizontal line. When the cuspidor is to be cleaned, it is placed in a carrying box and taken to the engine room where the contents, including the papers from the individual sanitary cups, are mixed with sawdust. A forked iron rod is run through the perforated feet and the box is thrust into the furnace. The rod is withdrawn and the furnace door closed. After awhile the box is turned over in the fire and the contents emptied. Both trouble and danger are reduced to a minimum. The appearance of the cuspidor is not objectionable, for the lid which slightly overhangs the box is arched to relieve its plainness and is frequently brushed with a thin solution of aluminum paint.

With this care, seemingly perfect ventilation, plumbing and germ-proof walls and floors, it is believed that any danger from infection can be prevented more thoroughly than in the home or average resort.

WILLIAM PORTER, M.D.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

IS ELECTRICITY GERMICIDAL?

LINTON, IND., Oct. 24, 1902.

To the Editor:—Can you give me reliable information in regard to the following: 1. Is electricity in any form and in any strength a germicide to all bacteria, when the temperature is kept low? 2. If so, what form and what strength? Is the α -ray germicidal?

M. N. THAYER, M.D.

ANS.—1. The experiments of Zeit (THE JOURNAL A. M. A., Nov. 30, 1901) show that electricity *per se* has practically no germicidal action. The destruction of bacteria caused by the passage of an electric current through cultures is explained by the generation of heat or the liberation of germicidal chemicals or other physical or chemical facts. 2. The germicidal properties of α -rays proper are practically nil. The effect produced by α -rays on bacteria in tissues, however, is well established, the result being explainable on increased phagocytosis of the cells caused by α -rays or some other change produced by α -rays in the tissues whereby they are rendered better able to cope with organisms.

State Boards of Registration.

Western Medical Reciprocity.—The presidents and secretaries of the state boards of health and licensing boards of Illinois, Nebraska, Kansas, Missouri and New Mexico, met at Kansas City, November 17, pursuant to a call which was noticed in THE JOURNAL of October 25. The representatives were: Illinois, Dr. George W. Webster, Chicago, president of the board; Nebraska, Drs. George H. Brash, Beatrice, secretary, and Benjamin F. Bailey, Lincoln, president; Kansas, Drs. Henry W. Robey, Topeka, secretary, and Edwin D. Packer, Osage City, vice-president; Missouri, Drs. A. W. McAlester, Columbia, president, and Winn F. Morrow, Kansas City, secretary; New Mexico, Dr. Walter G. Hope, Albuquerque, secretary. After considerable preliminary debate the following preamble and resolutions were unanimously adopted:

WHEREAS, The majority of the physicians in the United States are in favor of an improved and a higher standard of medical education, and

WHEREAS, They are also desirous of doing justice to all, of recognizing the value of experience as a qualification, and of doing justice to the veterans in the profession, and

WHEREAS, Any scheme of reciprocity to meet with favor and be enduring, must be in accord with these sentiments,

Therefore, Be It Resolved, First—That for those graduating in medicine hereafter, reciprocity in license should be based on the following:

- Uniformity in preliminary entrance requirements.
- Uniformity in the length and character of the medical course.
- Uniformity in the character of the examination.
- Uniformity in legislative enactments which shall permit, or authorize reciprocity.

Be It Also Further Resolved, That it is the sense of this meeting that the "Preliminary entrance requirement" should be satisfactory documentary evidence under oath of a high school education, of not less than three years' duration.

Be It Also Further Resolved, That it is the sense of this meeting that the medical course should consist of not less than four terms, or courses, of at least seven months each, in four separate calendar years, and that each term should consist of not less than eight hundred hours of actual work.

Be It Also Further Resolved, That it is the sense of this meeting that by "uniformity in character of the examination," we mean that with the exception following, all applicants should be examined in at least the following branches:

- Anatomy; 2. Bacteriology; 3. Chemistry; 4. Materia Medica and Therapeutics; 5. Obstetrics and Gynecology; 6. Pathology; 7. Physiology; 8. Practice of Medicine; 9. Surgery.

Be It Also Further Resolved, That the foregoing should be considered the minimum qualifications for admission to examination for license, and

Be It Further Resolved, That it is the sense of this meeting that each examining and licensing board or state board of health should be empowered by legislative enactment, to accept in lieu of an examination, all of the following:

- A diploma from a recognized medical school.
- A license from a reciprocating state board of health or licensing board.
- A certificate from the state board of health or licensing board, where the applicant last resided, showing at least ten years of reputable practice since graduation from a recognized medical school.

Rhode Island Examination.—Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the examination held at Providence, R. I., July 3, 1902, as follows: Number of subjects examined in, 7; questions, 70; percentage,

75; written examination; number examined, 19; passed, 16; failed, 3.

Candi- date.	Sch. of date. Pract.	PASSED.		
		College.	Year Grad.	Per Cent.
167	R.	Howard University	1902	84.9
169	R.	Howard University	1902	90.1
172	R.	Howard University	1900	78.7
168	R.	Jefferson Medical College	1902	84.7
171	R.	Medical School of Maine, Portland	1894	85.4
175	R.	College of P. and S., Baltimore	1902	79.6
176	R.	College of P. and S., New York	1902	82.0
187	R.	College of P. and S., New York	1877	86.6
177	H.	Hahnemann Med. Coll., Philadelphia	1902	80.6
178	K.	Med.-Chir. Coll., Philadelphia	1902	83.5
179	R.	University of Maryland	1902	73.0
182	R.	University of Maryland	1902	80.2
186	R.	University of Naples	1900	75.0
180	R.	Laval University	1891	85.3
183	R.	Baltimore Medical College	1902	75.0

FAILED.				
170	R.	Baltimore University	1898	70.2
173	R.	Dartmouth Medical College	1900	67.4

NOTE—In addition to the above, one non-graduate passed and one failed.

Dr. Swarts further reports the examination held October 2, at which there were examined 6 applicants, of whom 4 passed and 2 failed, as follows:

Candi- date.	Sch. of date. Pract.	PASSED.		
		College.	Year Grad.	Per Cent.
189	R.	College of P. and S., New York	1902	76.4
190	R.	Baltimore University	1898	77.1
192	R.	Harvard University	1902	79.4
193	R.	Harvard University	1902	93.6

FAILED.				
188	R.	Baltimore University	1900	67.4
191	R.	Baltimore Medical College	1893	66.7

Kansas Report.—Dr. H. W. Roby, Topeka, secretary of the Kansas State Board of Medical Registration and Examination, reports the examination held at Kansas City, Kan., Oct. 14, 1902, as follows: Number of subjects, 9; questions, 90; percentage required, 70; written examination; total number examined, 32; passed, 28; failed, 4.

Candi- date.	Sch. of date. Pract.	PASSED.		
		College.	Year Grad.	Per Cent.
1	R.	McGill University, Montreal	1902	86.0
2	H.	Southern Hom. Med. Coll., Baltimore	1898	74.0
3	R.	Detroit College of Medicine	1902	84.0
4	R.	Marion Sims-Beaumont M. C., St. L.	1902	80.0
5	R.	Maryland Medical College	1900	85.0
6	R.	Creighton Medical College, Omaha	1902	88.0
7	R.	Kansas Medical College	1902	79.0
8	H.	Kansas City Homeo. Med. College	1902	85.0
9	R.	Central Medical College, St. Joe.	1902	82.0
10	R.	Physicians and Surgs., Kansas City	1878	72.0
12	R.	Physicians and Surgeons, St. Louis	1898	79.0
11	R.	Western Reserve M. Coll., Cleveland	1898	77.0
13	R.	Woman's Med. Coll., Kansas City	1902	80.0
17	R.	University of Missouri, Columbia	1878	74.0
18	R.	Rush Medical College	1902	82.0
19	R.	Rush Medical College	1902	82.0
21	R.	Rush Medical College	1902	84.0
22	R.	Ensworth Med. Coll., St. Joseph	1902	71.0
23	R.	Ensworth Med. Coll., St. Joseph	1900	72.0
24	E.	Eclectic Medical Institute	1902	78.0
25	E.	Am. Med. Coll., St. Louis	1902	75.0
32	E.	American Med. Coll., St. Louis	1888	70.0
26	R.	Univ. Med. Coll., Kansas City, Mo.	1902	79.0
27	R.	Univ. Med. Coll., Kansas City, Mo.	1902	79.0
28	R.	Univ. Med. Coll., Kansas City, Mo.	1900	85.0
29	R.	Hosp. Med. Coll., Louisville	1877	70.0
31	H.	Missouri Medical, St. Louis	1877	70.0

FAILED.				
14	?	Cotner University	1896	...
20	R.	Jefferson Medical College	1895	...
30	?	New England University, Boston	1876	...

NOTE.—Nos. 15 and 16 are omitted, not being graduates of any medical school. They failed to pass.

Report from Vermont.—Dr. S. W. Hammond, secretary of the Vermont State Board of Medical Censors (Regular), reports the examination held at Burlington, Oct. 2 and 3, 1902, as follows: Number of subjects examined in, 8; total questions, 80; percentage required, 70 in all subjects; written examination; number examined, 10; passed, 8; failed, 2.

Candi- date.	Sch. of date. Pract.	PASSED.		
		College.	Year Grad.	Per Cent.
W. A. B.	R.	University of Vermont	1901	70.0
L. A. N.	R.	University of Vermont	1902	77.0
C. W. P.	R.	University of Vermont	1902	75.0
F. C. L.	R.	University of Vermont	1902	79.0
R. J. H.	R.	University of Vermont	1902	75.5
L. H. B.	R.	Dartmouth Medical College	1902	76.0
E. A. H.	R.	McGill University	1902	85.0
R. A. G.	R.	Baltimore Medical College	1902	81.5

FAILED.				
— — —	R.	University of Baltimore	1901	61.5
— — —	R.	University of Baltimore	1902	60.0

New Hampshire Announcements.—The next examination is at Concord, Dec. 9 and 10. No licenses issued by state.

or diplomas from medical colleges, are endorsed by the regent in place of examination, with one exception, graduates from Dartmouth Medical School may receive a certificate on presentation of diploma, if said diploma shall have been issued between the enactment of the Medical Law, March, 1897, and Jan. 1, 1903. Further information may be had from Channing Folsom, regent.

Medical Organization.

Organization Work in Kentucky.

BOWLING GREEN, KY., Nov. 17, 1902.

To the Editor:—At its annual meeting in 1901 the Kentucky State Medical Society arranged to keep in touch with the plan of reorganization then being formulated by the American Medical Association, by appointing a committee to revise its constitution and by-laws. This committee consisted of Drs. Steele Bailey, the secretary; Henry E. Tuley and J. N. McCormack, and at the annual meeting, held at Paducah in 1902, this committee reported, and, after full discussion, extending at intervals throughout the session, the society unanimously adopted the constitution and by-laws proposed by the association, without change, except the ratio of delegate representation from county societies was made one for each fifty, instead of one for each one hundred members, and such verbal alterations as related to the time and place of meeting.

Much enthusiasm was manifested on every hand during the session, and steps were at once taken to push the work of organization systematically in the various counties. The state was divided into eleven councilor districts, corresponding to the congressional districts, except that the fifth district—the city of Louisville—and the sixth district, lying contiguous to it on the Ohio river, were combined into one councilor district, and the eleventh congressional district, a large mountain region covering nineteen counties, was divided into two councilor districts. Provision was made for paying the traveling expenses of the councilors, and every member of the state society pledged himself to give them support.

Following, by councilor districts, is given the name and address of each councilor, the county societies organized and chartered, with the names and addresses of the officers of each society. All of the societies except six were organized under the new plan, giving thirty-nine county societies formed since the meeting of the state society.

FIRST DISTRICT.—Dr. J. R. Coleman, Paducah, councilor.

Ballard County Society: President, Dr. N. L. Rogers, Wickliffe; secretary, Dr. Z. W. Morgan, Wickliffe.
Calaway County Society: President, Dr. G. H. Covington, Wadesboro; secretary, Dr. W. H. Graves, Murray.
Fulton County Society: President, Dr. P. B. Curlin, Hickman; secretary, Dr. Samuel Cohn, Fulton.
Hickman County Society: President, Dr. W. R. Moss, Clinton; secretary, Dr. W. A. Craig, Clinton.
Lyon County Society: President, Dr. J. H. Hussey, Eddyville; secretary, Dr. D. J. Travis, Eddyville.
McCracken County Society: President, Dr. S. Z. Holland, Grahamville; secretary, Dr. T. U. Moss, Woodville.

SECOND DISTRICT.—Dr. James D. Sory, Madisonville, councilor.

Christian County Society: President, Dr. W. W. Ray, Hopkinsville; secretary, Dr. R. L. Woodard, Hopkinsville.
Daviss County Society: President, Dr. S. J. Harris, Philpot; secretary, Dr. J. J. Rodman, Owensboro.
Hancock County Society: President, Dr. Albert Griffin, Utility; secretary, Dr. C. R. Lightfoot, Hawesville.
Henderson County Society: President, Dr. W. J. Stone, Henderson; secretary, Dr. W. S. Porwood, Henderson.
Hopkins County Society: President, Dr. B. T. Earle, Charleston; secretary, Dr. R. W. Long, Madisonville.
Union County Society: President, Dr. R. L. Martin, Bordley; secretary, Dr. I. D. Winston, Sturgis.
Webster County Society: President, Dr. C. L. Edwards, Sebree; secretary, Dr. J. A. Goodson, Dixon.

THIRD DISTRICT.—Dr. A. T. McCormack, Bowling Green, councilor.

Allen County Society: President, Dr. W. B. Ray, Scottville; secretary, Dr. J. B. House, Scottville.
Muhlenburg County Society: President, Dr. J. T. Woodburn, Bremen; secretary, Dr. Augustus Lewis, Greenville.
Todd County Society: President, Dr. W. B. Jefferson, Elkton; secretary, Dr. T. E. Bruce, Elkton.
Warren County Society: President, Dr. H. P. Cartwright, Bowling Green; secretary, Dr. John H. Blackburn, Bowling Green.

FOURTH DISTRICT.—Dr. R. C. McChord, Lebanon, councilor.
Larue County Society: President, Dr. W. E. Rodman, Hodgenville; secretary, Dr. E. S. Smith, Hodgenville.

Marion County Society: President, Dr. Edward Kelley, Lebanon; secretary, Dr. R. C. McChord, Lebanon.
Meade County Society: President, Dr. D. C. Pusey, Brandenburg; secretary, Dr. W. T. Miles, Brandenburg.
Ohio County Society: President, Dr. J. W. Taylor, Cromwell; secretary, Dr. S. J. Wedding, Hartford.

FIFTH AND SIXTH DISTRICTS.—Dr. Louis Frank, Louisville, councilor.

Jefferson County Society: President, Dr. William Bailey, Louisville; secretary, Dr. R. A. Bate, Louisville.

SEVENTH DISTRICT.—Dr. David Barrow, Lexington, councilor.
Fayette County Society: President, Dr. J. C. Carrick, Lexington; secretary, Dr. G. P. Sprague, Lexington.

Henry County Society: President, Dr. W. T. Coblin, Campbellsburg; secretary, Dr. A. P. Dowden, Eminence.
Owen County Society: President, Dr. S. A. Veal, Squiresville; secretary, Dr. J. P. Lindsey, Owenton.

Scott County Society: President, Dr. Caswell Graves, Paynes Depot; secretary, Dr. J. C. Lewis, Georgetown.

Woodford County Society: President, Dr. J. C. Lowery, Troy; secretary, Dr. W. C. McCauley, Versailles.

EIGHTH DISTRICT.—Dr. Steele Bailey, Stanford, councilor.

Anderson County Society: President, Dr. O. L. Townsend, Orr; secretary, Dr. L. C. Moffitt, Alton Station.

Boyle County Society: President, Dr. W. A. Brown, Parkesville; secretary, Dr. J. C. Bogle, Danville.

Garrard County Society: President, Dr. H. C. Herring, Lancaster; secretary, Dr. H. M. Grant, Lancaster.

Jessamine County Society: President, Dr. Charles Mann, Nicholasville; secretary, Dr. J. A. Vanarsdall, Nicholasville.

Lincoln County Society: President, Dr. Hawkins Brown, Hustonville; secretary, Dr. L. B. Cook, Stanford.

Shelby County Society: President, Dr. Curtis Austen, Bagdad; secretary, Dr. T. E. Bland, Shelbyville.

NINTH DISTRICT.—Dr. J. E. Wells, Cynthiana, councilor.

Carter County Society: President, Dr. J. D. Muters, Rush; secretary, Dr. N. K. Williams, Willard.

Harrison County Society: President, Dr. Josephus Martin, Cynthiana; secretary, Dr. Marshall McDowell, Cynthiana.

Mason County Society: Dr. James Shackelford, Maysville; secretary, Dr. A. G. Browning, Maysville.

Robertson County Society: President, Dr. J. B. Wood, Mt. Olivet; secretary, Dr. W. S. Chandler, Mt. Olivet.

TENTH DISTRICT.—Dr. I. A. Shirley, Winchester, councilor.

Breathitt County Society: President, Dr. C. H. Williams, Jackson; secretary, Dr. J. P. Boggs, Jackson.

Clark County Society: President, Dr. N. V. Frewitt, Winchester; secretary, Dr. I. A. Shirley, Winchester.

Lee County Society: President, Dr. M. F. Reed, Beattyville; secretary, Dr. J. H. Evans, Beattyville.

Montgomery County Society: President, Dr. W. S. Van Antwerp, Mt. Sterling; secretary, Dr. C. B. Duerson, Mt. Sterling.

Morgan County Society: President, Dr. W. G. Carter, West Liberty; secretary, Dr. E. C. Gevidon, Grassy Creek.

Powell County Society: President, Dr. A. M. Swango, Stanton; secretary, Dr. C. D. Mansfield, Stanton.

Wolfe County Society: President, Dr. B. D. Cox, Fincastle; secretary, Dr. J. H. Stamper, Campton.

ELEVENTH DISTRICT.—Drs. G. M. Reddish, Somerset, and L. L. Robertson, Middlesboro, councilors.

Casey County Society: President, Dr. W. T. Garner, Humphrey; secretary, Dr. D. S. Floyd, Joyce.

Pulaski County Society: President, Dr. G. M. Reddish, Somerset; secretary, Dr. A. W. Cain, Somerset.

The work is under way in many other counties and it is the hope of its friends to reach and organize the profession in a large majority of these before the next meeting of the state society. That the profession is ripe for organization everywhere is shown by the ease in forming societies in every county visited by any one at all acquainted with the work. So far several of the councilors have done practically nothing, the county organizations in their districts having resulted from other influences, but it is hoped that each of these gentlemen will meet his responsibilities in the near future. Especial mention should be made of the faithful and highly successful work already done by Dr. I. A. Shirley, councilor in the tenth district, who, in a region largely mountainous and sparsely settled, has organized seven promising county societies. He expects to reach several other counties within the next few weeks, and has then promised to do some missionary work in counties outside of his district.

The president of the state society, Dr. W. W. Richmond, and the secretary, Dr. Steele Bailey, are earnestly supporting every effort being made for the organization and elevation of the profession, and Kentucky promises to be in the line with her sister states by the next meeting of the Association.

Respectfully,

J. M. MCCORMACK.

Weakley County (Tenn.) Medical Society.

The society was organized at Dresden, Tenn., November 3. The following officers were elected: Dr. Vincent A. Biggs, Martin, president; Dr. Adolphus Finch, Dresden, and Dr. Mitchell, Greenfield, vice-presidents, and Dr. Carl Finch, Dresden, secretary and treasurer.

Henderson County (Tenn.) Medical Society.

This society was organized at Lexington October 28 with 19 members. The following officers were elected: Dr. Martin P. Boyd, Farmville, president; Drs. John M. Arnold, Middeford, and John H. Howard, Lexington, vice-presidents; Dr. C. H. Johnston, Lexington, secretary, and Dr. William Watson, Lexington, treasurer.

Emmet County (Mich.) Medical Society.

The physicians of Emmet County met at Petoskey October 23 and organized a county society to be a branch of the state society with the following officers: Dr. Henry T. Calkins, president; Dr. John J. Reyecraft, vice-president; Dr. George W. Nihart, treasurer, and Dr. George E. Reyecraft, secretary, all of Petoskey.

Ottawa County (Mich.) Medical Society.

A new county medical society was organized at Grand Haven October 28, whose membership includes the regular physicians of Ottawa County. The Grand River Valley Medical Society has been merged into the new organization, which is a branch of the Michigan State Medical Society. The following officers were elected: Dr. Henry Kremers, Holland, president; Drs. Cyril P. Brown, Spring Lake, and Byron B. Godfrey, Holland, vice-presidents; Dr. Daniel G. Cook, Holland, secretary, and Dr. Abraham Leenhouts, Holland, treasurer.

Marriages.

C. LE VAN MANDERBACH, M.D., St. Louis, to Miss Nellie Howell of Kansas City, Mo.

WILLIAM DONOVAN, M.D., U. S. A., to Miss Julia Dunne, both of New York City, November 5.

FREDERICK BENTLEY, M.D., Danforth, Ill., to Miss Hattie Barton of Chicago, November 3.

ISAAC L. WATKINS, M.D., to Miss Nellie Thigpen, both of Montgomery, Ala., November 5.

GEORGE W. PAYNE, M.D., Bardwell, Ky., to Miss Alda Moore of Arlington, Tenn., November 11.

AILEEN M. BETTEYS, M.D., Oxford, Mich., to Robert M. Corbit of Clarence, Iowa, October 22.

JOHN C. HATHAWAY, M.D., to Miss Fern Kimball, both of Mechanicsburg, Ohio, November 4.

WILLIAM F. HUGHEY, M.D., Yellowbud, Ohio, to Miss Maud Shotts of Denver, Ohio, October 29.

ALEXANDER E. LOW, M.D., Chicago, to Miss Adelaide M. Butts of Janesville, Wis., October 22.

ERNEST H. RAWLS, M.D., Soperton, Ga., to Mrs. Lottie Browne of Savannah, Ga., October 30.

IRWIN W. BLAKE, M.D., Ladysmith, Wis., to Miss Irene Dennis of Viroqua, Wis., November 1.

ARTHUR L. KELSEY, M.D., to Miss Eunice Weston Blanchard, both of Santa Paula, Cal., October 31.

JAMES E. CHIPPS, M.D., Birdsville, Ky., to Miss Helen D. Brashear of Louisville, Ky., October 29.

J. GILBERT SMITH, M.D., McDonough, Ga., to Miss Eunice Landrum of Atlanta, Ga., November 12.

RICHARD M. LITTLE, M.D., Dresden, Tenn., to Miss Ina Allen Bobbitt of Gleason, Tenn., November 12.

AART VAN WESTRIENEN, M.D., Kenosha, Wis., to Miss Kate Pals of Grand Haven, Mich., October 29.

C. HOWARD LEWIS, M.D., to Mrs. Georgeanna Kelly, both of Baltimore, at Philadelphia, November 8.

SAMUEL S. LATHROP, M.D., Norwich, Conn., to Miss Janet Torrance of Greeneville, Conn., November 5.

THEODORE D. PALLMAN, M.D., New Haven, Conn., to Miss Ruth Hall of New York City, November 12.

WALTER S. PATTERSON, M.D., Allegheny, Pa., to Ella H. Hackett, M.D., of Philadelphia, November 3.

HARRY CLINTON TULL, M.D., Jesterville, Md., to Miss Edna Williams Gillis of Salisbury, Md., October 29.

WALTER HERBERT BROWN, M.D., Youngwood, Pa., to Miss Irene Gibbons of Washington, D. C., October 29.

JAMES THOMAS RUSHIN, M.D., Tallassee, Ala., to Miss Bessie May Elsberry of Montgomery, Ala., November 4.

MANUEL V. SYLVIA, M.D., New Bedford, Mass., to Miss Georgiana Goodwin of Natick, R. I., October 30.

FRANK A. MILLARD, M.D., Detroit, to Miss Margaret Josephine Wilkinson of Windsor, Ontario, October 30.

C. M. SOUTHARD, M.D., Zanesville, Ohio, to Miss Georgia Gault of Columbus, Ohio, at Newark, Ohio, October 29.

WILLIAM H. DE LA FAYETTE, M.D., Nickerson, Kan., to Miss Mabel Evans of Kansas City, Mo., at Nickerson, Mo., October 27.

CHARLES M. EDWARDS, M.D., Richmond, Va., son of Dr. Landon B. Edwards, to Miss Lelya Le Moyne Gahagan of New York City, October 29.

Deaths.

Thomas F. McManus, M.D. Western Pennsylvania Medical College, Pittsburg, 1890, an active member of the Allegheny County Medical Society, died at his home in Pittsburg, November 5, after an illness of one week, from pneumonia complicating typhoid fever, aged 42.

Andrew G. Clark, M.D. Transylvania University, Lexington, Ky., a practitioner for nearly 70 years in Parkersburg, W. Va., died at his home in that city, November 7, aged 93. The bulk of his estate is left for the building of a hospital in Parkersburg.

Henry M. Cox, M.D. University of Michigan, Ann Arbor, 1868, for many years president of the Board of Health of Washington, N. J., died at his home in that place, November 5, from cancer of the stomach, after a long illness, aged 59.

Carl Pesold, M.D. St. Louis College of Physicians and Surgeons, 1892, major and surgeon, First Infantry, Missouri National Guard, died at his home in St. Louis, November 6, from liver disease, after an illness of one year, aged 44.

Wilmot Ayres, M.D. Baltimore Medical College, 1883, surgeon at Camp Meade during the Spanish-America War, died at his home in Harrisburg, Pa., from pneumonia, after an illness of five weeks, November 7, aged 54.

J. Newton Walker, M.D. University of Pennsylvania, Philadelphia, 1856, for many years a resident of Cape May Point, committed suicide by shooting, August 15. His body was not found until November 10.

Richard N. Hawkins, M.D. Miami Medical College, Cincinnati, 1868, of Birmingham, Ala., died at his residence in Elyton, November 6, from Bright's disease, after an illness of several weeks, aged 56.

John A. Watson, M.D. University of Maryland, Baltimore, 1872, died at his home in Asheville, N. C., November 4, from acute uremia, after an illness of only a few hours, aged 53.

L. C. Beal, M.D. Western Reserve University, Cleveland, Ohio, 1884, died at his home in Uniontown, Pa., October 29, from paralysis after an illness of three days, aged 52.

John E. Mealy, M.D. College of Physicians and Surgeons, Columbus, Ohio, 1896, Girard, Ohio, died suddenly at Cleveland, Ohio, November 2, from heart disease, aged 30.

John W. James, M.D. Jefferson Medical College, Philadelphia, 1895, died at his home in Pittsburg, Pa., November 6, from apoplexy, after a lingering illness, aged 65.

William Thomas Lavvorn, M.D. Atlanta (Ga.) College of Physicians and Surgeons, 1901, died from consumption at his home in Newell, Ala., November 1, aged 28.

A. Melville Tully, M.D. late captain and assistant surgeon, U. S. Army, died at Las Vegas, N. M., November 5, from tuberculosis, after a long illness, aged 48.

John C. Lightfoot, M.D. University of Tennessee, Nashville, 1891, died at his home near Drake, Ky., October 31, from consumption, after a long illness, aged 35.

Harry H. Young, M.D. Columbus (Ohio) Medical College, 1890, died from hemorrhage of the stomach in the Hartman Hospital, Columbus, October 18, aged 34.

Archibald B. Terry, M.D. Tulane University, New Orleans, La., 1898, was instantly killed by a fall from his buggy, near his home in Longview, Texas, October 30.

Roy H. McCarl, M.D. Omaha (Neb.) Medical College, 1896, Wellman, Iowa, died at Omaha, November 2, after an operation for appendicitis, aged 29.

Walter E. Griffin, M.D. University of Michigan, Ann Arbor, 1896, assistant surgeon, U. S. Navy, died at Cavite, Philippine Islands, October 28.

A. M. Powell, M.D. Washington University, St. Louis, 1860, died at his home in Collinsville, Ill., November 3, after a brief illness, aged 67.

John V. Everett, M.D. Tulane University, New Orleans, 1876, died at his home in Weatherford, Texas, October 28, from Bright's disease.

George A. Osborne, M.D. Medical College of Indiana, Indianapolis, 1873, died at his home in South Bend, Ind., November 5, aged 80.

Amos Thornburg, M.D. Atlanta (Ga.) Medical College, 1859, of Chattanooga, Tenn., died recently at Birmingham, Ala.

John C. Reese, M.D. Medical College of Georgia, Augusta, 1857, died suddenly at his home in Reesburg, Ga., November 30.

Henry C. Summers, M.D. University of Cincinnati, 1878, died suddenly at his home in Daleville, Ind., November 4.

Fred D. Miller, M.D. College of Physicians and Surgeons, Baltimore, 1882, recently died at his home in Alden, Mich.

Edward Little, M.D. University of Buffalo (N. Y.), 1862, died at his home in Buffalo, October 30, aged 75.

Deaths Abroad.

Lennox Browne, F.R.C.S. (Edin.), a well-known specialist in diseases of the throat, died from carcinoma of the liver at Northwood, England, November 2, aged 61. Mr. Lennox Browne was admitted to membership in the Royal College of Surgeons in England in 1863, and in 1873 was made a Fellow of the Edinburgh College. He practiced for a time in Australia, but returned in 1867 to London, where he became assistant to the late Sir Morell MacKenzie, with whom he was associated for seven years, and during that time was a member of the staff of the Hospital for Diseases of the Throat, Golden Square. In 1874 he was one of the founders of the Central London Throat, Nose and Ear Hospital and was senior surgeon to that hospital for many years. On retirement from active practice he was appointed consulting surgeon. He was also surgeon and oral surgeon to the Royal Society of Musicians, Royal Choral Society and Dramatic Sick Fund. He was original fellow and sometime president of the British Laryngological and Rhinological Association and fellow of the Medical and Pathological societies, honorary member of the Philadelphia Medical Society, and corresponding fellow of the American Laryngological Association. He was a large contributor to the literature of his specialty, his chief work being a text-book entitled "The Throat and Nose, and Their Diseases," the fifth edition of which appeared in 1898.

Dr. J. Hermann of Vienna, noted as an antagonist of mercurial treatment of syphilis.—Dr. Moritz Fraenkel of Dessau, well known as an alienist and in charge of the insane asylums of Anhalt.—Dr. Ledoux-Lebard, laboratory chef at the Paris Pasteur Institute, in his fifty-fourth year, author of numerous studies on the pseudo-tubercle bacilli, etc.—Dr. E. Hahn, a prominent surgeon at Berlin, director of the surgical service at the Friedrichshain Hospital, November 1, 61 years of age.

Dr. R. A. Monteiro, dean and professor of clinical medicine at Bahia, Brazil. He was born in 1839, married at 17, and died September 15, victim of an internal cancer. One of his latest works was on "Certain Difficulties in the Diagnosis of Beri-Beri and of Nephritis."

Miscellany.

Serum-Therapy in Scarlatina.—In his report of his experiments with the serum treatment of scarlatina, in the *Montreal Med. Jour.* for October, Charlton first gives due credit to Moser for independent work in the same line and priority in publication. His own work dates back two years and the striking agreement of the results with those of the Austrian physician is noticed. Like other observers, he found the streptococci abundant in the blood, urine, pus, etc., of scarlatina, but he is not convinced that it is the germ of the disease. On the contrary, he looks on it as the producer of a secondary affection to which most if not all the unfavorable complications of the disorder are due, hence the call for an anti-streptococcus serum to counteract the toxins and destroy their producers. After experimenting with a number of different sera without success, he finally obtained one prepared by Dr. Hubbert of Detroit. Thus far he has used it in 15 cases, all severe, with 13 recoveries almost without complications. There were two deaths,

but one of these was moribund when seen and died in four hours, the other was suffering from a severe pneumonia on admission to the hospital, and though improving somewhat, succumbed five days later in an attack of laryngeal diphtheria. The quantity of serum used was moderate, usually 20 c.cm., but if a large quantity was required this dose was repeated. In this respect it seems more active than that of Moser. The effect was usually prompt. The temperature began to fall in two hours and became normal in from two to four days. No other treatment except stimulation the first three or four days and the usual attention to laxatives, diet and rest. No bad symptoms appeared from the use of the serum. He does not credit it with curing scarlatina, but its timely use allays unfavorable symptoms, overcomes complications, and tends to recovery. The results of the injections are thus summed up: 1. Rapid subsidence of fever. 2. Accompanying decrease and improvement of pulse. 3. Prevention on marked improvement of such complications as cervical adenitis. 4. Rapid and favorable convalescence in the majority of cases. Dr. Charlton hesitates to lay most stress on the reduction of the mortality, though he should have expected, from his experience, a fatal result in most of these cases. But he has never before seen the disease pass so suddenly from a severe—not to say alarming—to a relatively mild condition. He asks for co-operation in this study of the serum treatment of scarlatina.

Societies.

COMING MEETINGS.

Indian Territory Medical Association, Muskogee, Dec. 2-3, 1902.
Western Surgical and Gynecological Association, St. Joseph, Mo., Dec. 29, 1902.

Vermilion County (Ill.) Medical Society.—At the annual meeting of this society, November 9, Dr. Henry F. Becker, Danville, was elected president; Dr. Frazier N. Cloyd, Westville, vice-president, and Dr. Elbert E. Clark, Danville, secretary-treasurer.

Santa Barbara (Cal.) Medical Society.—This society, long quiescent, was revived and reorganized, November 1, with Dr. Charles Anderson, president; Dr. Charles E. Vaughan, vice-president; Dr. William B. Cunnane, secretary, and Dr. William H. Flint, treasurer.

Corsicana District (Texas) Medical Society.—The annual election of officers of this society, November 4, resulted as follows: President, Dr. John M. V. Wills; vice-presidents, Drs. Clay, Johnson and John E. McClung, all of Corsicana, and secretary, Dr. W. D. Fountain, Venus.

Auxplaines (Ill.) Medical Society.—This society met at Maywood, October 31. Resolutions were adopted making the society a branch of the Chicago Medical Society, and providing that no one shall be eligible to membership in the local body who is not a member of the Chicago organization.

American Roentgen-Ray Society.—The third annual meeting of this society will be held at the Sherman House, Chicago, December 10 and 11. Dr. James B. Bullitt, Louisville, Ky., is secretary of the society, and Dr. Ralph R. Campbell, 414 Marquette Building, Chicago, chairman of the committee of arrangements.

Piedmont (Va.) Medical Society.—At the last meeting of this society, held in Fredericksburg recently, Dr. William H. Lyne, Somerset, resigned as president on account of removal from the jurisdiction. Dr. R. Lee Taliaferro, Madison Mills, was elected president to fill the unexpired term, and Dr. Jesse Ewell, Ruckersville, vice-president.

West Texas Medical Association.—The twenty-sixth annual meeting of this organization was held in San Antonio, October 23. The following officers were elected: President, Dr. Thomas T. Jackson, San Antonio; Drs. Marvin B. Grace, Seguin, and William M. Wolf, San Antonio, vice-presidents, and Dr. Witten B. Russ, San Antonio, secretary and treasurer.

Boulder County (Colo.) Medical Society.—This society met at Boulder, November 6. Dr. Philip H. Keyser, Boulder, read a paper on "The Value of Psychology to the Physician," and Dr. E. F. Talbott, Boulder, made a tabulated report of one hundred consecutive cases of obstetrics. Eight new members were admitted, and six applications for membership were made.

National Association for the Study of Epilepsy and the Care and Treatment of Epileptics.—This society held its annual meeting at the New York Academy of Medicine, November 5. The following officers were elected: Dr. Wharton Sinkler, Philadelphia, president; Dr. William Osler, Baltimore, vice-president, and Dr. William P. Spratling, Sonyea, N. Y., secretary and treasurer.

New York Obstetrical Society.—At the annual meeting of this society, in October, the following officers were elected: President, Dr. Egbert H. Grandin; vice-presidents, Drs. J. Clifton Edgar and George W. Jarman; recording secretary, Dr. William S. Stone; assistant recording secretary, Dr. Howard C. Taylor; corresponding secretary, Dr. Edward E. Tull; treasurer, Dr. J. Lee Morrill, and pathologist, Dr. William S. Stone.

Southern Illinois Medical Association.—This society, at its meeting in Centralia, November 7, after a spirited discussion on the kind of legislation needed, appointed a committee to assist the Illinois State Medical Society in pushing the bill to divorce the control of physicians from the state boards of health on the ground that the present board has too much to do and that a special examining board is needed. Dr. James A. Helm, Metropolis, was elected president; Dr. Edgar E. Fyke, Centralia, secretary, and Dr. Alexis T. Telford, Menard, treasurer. The society will meet in Marion in November, 1903.

British Medical Association, Halifax Branch.—This branch of the association, which was organized in 1887, met at Halifax, October 15, when the following officers were elected: President, Dr. George M. Campbell; vice-president, Dr. Frederick W. Goodwin; secretary, Dr. C. Dickie Murray; treasurer, Dr. Antony I. Mader. Surgeon-General Thomas F. O'Dwyer, A.M.S., was appointed representative on the Council and Parliamentary Bills Committee. The next evening will be devoted to military surgery, when Dr. Carleton Jones, who has recently returned from South Africa, will read a paper on the work done by the Canadian Field Hospital Corps during the latter part of the late war.

Gallia County (Ohio) Medical Society.—This society, at its regular meeting, November 6, was entertained by the staff of the Ohio Hospital for Epileptics, in the pathological laboratory of the hospital. The following program was offered, together with an exhibition of patients and practical laboratory demonstrations: "A Case of Epilepsy and Hemiplegia, Presumably of Syphilitic Origin," by Dr. Harry S. Allen; "A Case of Chronic Lead Poisoning, with Remarks on Saturnine Epilepsy," by Dr. W. C. Gill; "Remarks on Hypernephroma or Adrenal Tumor of the Kidney," and "A Survey of Recent Laboratory Methods for the Diagnosis of Hydrophobia," by Dr. A. P. Ohlmacher, and "Demonstration of the Widal and Diazo Reactions," by Theodore L. Chadbourne.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Fifteenth Annual Meeting, held in Cincinnati, Nov. 11-13, 1902.

Under the Presidency of Dr. W. E. B. Davis, Birmingham, Ala.

Hypertrophy of the Prostate.

Dr. N. P. DANDRIDGE, Cincinnati, was convinced that the field of usefulness for prostatectomy, when used with discrimination, was large. He strongly urged the necessity of not being carried away by operative furor, which might lead to the same excess which a few years ago characterized the surgery of the ovary, an excess which was now followed by a marked recoil.

Conservative Operations on the Ovary.

Dr. L. H. DUNNING, Indianapolis, reported his experience with more than 100 operations. He employed the method of incising small single cysts, and hematomata, removing the lining membrane, trimming away the redundant portion of the outer wall of the cyst and joining the edges of the incision by a running stitch of fine catgut. In a few instances he used the thermocautery to check hemorrhage, and in other instances he punctured several small cysts and dropped the ovary. He reported gratifying results in 80 per cent. of cases. After a few trials he rejected conservative methods in pus cases, and in cases in which there were numerous small cysts in all parts of the ovary. He found conservative work unsatisfactory in sterile married women, and in interval appendicitis operations in which there was a markedly cystic right ovary. In his series there were known to be 6 cases of pregnancy in which the

patients were happy mothers, and there was a group of 10 cases in girls and young women from whom he had extirpated an ovarian tumor from one side, and had done a conservative operation on the other ovary with a large measure of success.

Even should a considerable per cent. of failures to cure appear, the writer would continue to do conservative work. He believed that the reason we are not able to select our cases was that cystic degeneration of the ovary is a progressive disease, the limits of which one is not able at present to predict. He hoped that with our increasing knowledge we would be better able to select the curable cases for operation.

DISCUSSION.

Dr. GEORGE H. NOBLE had done considerable conservative work on ovaries in such cases as the author had mentioned, and he was satisfied that it was the proper thing to do.

Dr. HENRY T. BYFORD said that formerly ovaries were removed extensively by gynecologists, and that now there was a sufficient number of cases on record to determine what effect the removal of the ovaries had in young people. He recalled quite a number of cases from whom he had removed the ovaries, the operation having produced no harm or mental effect. In many of the cases the women had been in better health since the operation. Conservative operations, if aseptically and properly done, should be followed by good results, without necessarily removing the ovaries.

Dr. WALTER P. MANTON began conservative work on the ovaries several years ago, and he found that in the majority of instances he was successful in relieving the symptoms. However, he had had a few unsuccessful cases which led him to be skeptical in regard to the good work which he might have done formerly. Resection of a cystic ovary or the puncture of cysts of the ovary, followed by swabbing with carbolic acid and alcohol, and sterile water, give satisfactory results.

Dr. GEORGE J. ENGELMANN said all were agreed that it was desirable to leave as much of the tissue as would preserve the sexual activity, and the question arose, How much could be removed and the menstrual function still be preserved, thereby relieving the patient?

Dr. J. G. EARNEST stated that the physician should always make a plain statement to the patient as to what she may expect.

Dr. A. M. CARTLEDGE did not think the association should go on record as advocating the removal of both ovaries in young women simply because they had pus tubes. In every case, he recommended leaving a piece of an ovary, if it is not larger than a grain of corn.

Dr. RICHARD DOUGLAS thought the last speaker had misunderstood the essayist, who did not advocate the removal of healthy ovaries when the tubes alone were affected, but discountenanced the resection of infected ovaries, and with the essayist he agreed in this particular.

Dr. EDWIN WALKER made a plea for more accurate diagnoses, saying that many of these patients suffer from other diseases.

The Surgical Treatment of Pancreatic Cysts.

Dr. A. MORGAN CARTLEDGE, Louisville, Ky., reported two cases, and said that cysts of the pancreas, while rarely encountered, are still the most common pathologic condition of this deep-seated organ that surgeons are called on to treat. The field of surgery of the pancreas should be extended. According to Bückel, the cases treated surgically now number 115. In 99 of those the cyst was opened at the first sitting, with the result that 92 recovered and 7 died. In 16 cases the cyst was opened subsequently, after the formation of adhesions, with 16 recoveries and no deaths. This spoke well for the treatment by incision and drainage. The same author had collected 25 cases where extirpation, either complete or partial, of the sac was practiced, with 4 deaths.

A comparison of the results shown by statistics would seem to indicate that incision and drainage should be practiced as a routine procedure in pancreatic cysts; and yet a closer study of the clinical forms which the cyst may present, together with a closer study into the convalescence of the drained subjects, might cause surgeons to attempt extirpation of the sac more frequently and with better results.

DRS. C. H. MAYO, L. H. DUNNING and ALEXANDER H. FERGUSON mentioned briefly cases they had observed.

DR. RICHARD DOUGLAS said that Mr. Jordan Lloyd had emphasized the fact that there were true and pseudo-cysts of the pancreas. The recent work of Robson, Mayo and others, he thought, had shown the relation between gallstones and pancreatic disease, and it was possible we might have here a true solution of the pathology.

The Curse of Gonorrhea.

DR. JOSEPH TABER JOHNSON, Washington, D. C., followed with a paper on this subject, saying that there is indisputable and overwhelming evidence of a large annual loss of life from specific pelvic inflammation and of a far greater loss of health and power of conception, from the same cause.

From the best statistics he had been able to obtain there are 300,000 women in this country leading lives of prostitution, and the estimate is made by health officers and the superintendents of police in thirty large cities, who made reports on this subject, that for every woman who regularly resides in a house of ill-fame, there is at least one, if not more, just as bad, who never, or rarely, becomes known to the police. This would give half a million at the lowest estimate of candidates for this disease in our country alone.

The chief danger of gonorrhea in the female is the infection of the uterus and uterine appendages. Gonorrhea is the chief source of salpingitis and pelvic peritonitis.

The point on which he laid the greatest emphasis was that gynecologists should be more certain that patients of both sexes are absolutely cured before they are dismissed.

Chronic Appendicitis and Movable Right Kidney.

DR. WALTER P. MANTON, Detroit, called attention to movable right kidney as a factor in the production of chronic appendicitis. In his experience, movable kidney was the most frequent cause of chronic appendiceal disease.

In 200 consecutive cases from his note books the essayist found that the right kidney showed abnormal mobility in 36.5 per cent., and in 65 per cent. a diagnosis of chronic appendicitis was also made. In 22.5 per cent. of this number the diagnosis was confirmed by operation. Among the other cases some were of too mild a type to demand immediate intervention, the patient refused operation, or was now waiting for this to be performed.

Dr. Manton accepted the theory of Edebohls as the most satisfactory yet offered, namely, that the kidney compresses the superior mesenteric vessels between the head of the pancreas and the spinal vertebrae, thus interfering with the circulation in the appendix, and causing congestion and inflammation.

He lays special stress on two points: First, that in obscure abdominal conditions, a diagnosis should not be attempted until movable kidney and chronic appendicitis can be excluded by careful abdominal palpation; and, second, that when nephroptosis and appendicitis are present, operations on the uterus and adnexa will not be followed by cure of the patient unless one or both of these conditions is also removed.

DISCUSSION.

DR. BACON SAUNDERS said his experience had not led him to believe that most of his cases of chronic appendicitis had depended on movable kidney, although the condition may have been overlooked.

DR. EDWIN WALKER had noticed the co-existence of the two diseases, but had not found it common.

DR. ROBERT T. MORRIS had given considerable attention to the association of the two affections, and frequently, where a loose kidney pressed on the superior mesenteric vessels, he had found congestion of the cecum, and on careful palpation, the appendix was found tense; infective appendicitis is more common in such cases.

DR. CHARLES P. NOBLE had operated on 100 cases of movable kidney, and so far as his observation went, he did not think there were more than six in which the appendix was involved.

DR. A. M. CARTLEDGE thought the two affections were more frequently associated than the essayist's statistics showed.

DR. ALEXANDER H. FERGUSON did not think there was any relationship between appendicitis and floating kidney *per se*.

The kidney might be down on the brim of the pelvis and resting on the tip of the appendix without disturbing it.

DR. C. H. MAYO said there was one class of floating kidney which was very movable. One could fix the kidney and obtain a good result, and in some of these he was now removing the appendix at the time the kidney was fixed to determine, if possible, the relationship between the two affections.

DR. W. P. McADORY did not think movable kidney had much to do in causing chronic appendicitis, yet the two conditions might occur frequently at the same time.

DR. GEORGE H. NOBLE, Atlanta, Ga., described a new operation for complete laceration of the perineum, which was illustrated and given in detail in THE JOURNAL, August 9, page 302.

Pregnancy and Labor Following Complete Nephro-Ureterectomy.

DR. J. WESLEY BOYCE, Washington, D. C., in a paper with this title stated that the removal of the kidney had become a frequent operation and no longer excited surprise or comment on the part of the medical profession. It is well understood that removal of a kidney, the function of which has not been previously suspended, entails additional eliminative work on the kidney of the other side. It must be admitted that one kidney is rarely able to perform the functions of two healthy ones, and that any extra taxation on its eliminative powers incident to autointoxication of various forms, is liable to seriously embarrass its functional activity. When nephrectomy has been done for renal calculi, with pyonephrosis or tuberculosis, the same condition is liable to be present, in some slight degree at least, in the remaining kidney. Its function is accordingly interfered with. Various investigators have found a marked toxicity of the urine during pregnancy. Nephritis during this condition is very common. Winckel claimed that 2 per cent. of women, healthy before pregnancy, have albumin in the urine during pregnancy, and, further, that 6 per cent. of all pregnant women have albuminuria. One notable fact in connection with the toxemias of pregnancy, or uremia, is that the amount of urea in the urine is always found markedly diminished. Another important matter is the changes in arterial tension, which vary during and following labor.

He narrated cases and said in conclusion that pregnancy and labor following nephrectomy seriously jeopardize life. Renal complications must necessarily be greatly increased, and therefore induction of premature labor and other treatment of these complications are more often necessitated. The evidence of permanent impairment of the remaining kidney as a result of pregnancy and labor is by no means convincing, but the writer's opinion was that as records are made of such cases, these effects will be apparent.

The President's Address.

This was delivered by the President, Dr. W. E. B. Davis, Birmingham, Ala. He recommended in addition to honorary members, that the Association have another class to be known as life members, to be composed of men of great eminence who were more than 65 years of age, or who had been members twenty years and attended 50 per cent. of the meetings. He suggested that Drs. J. McFadden Gaston, Atlanta; R. B. Maury, Memphis, and Thaddeus A. Reamy, Cincinnati, be recommended by the council for this class of membership. He advised the association to limit its membership to 200, and advised the members to establish a memorial to the association in Birmingham, its birthplace.

He said the national special societies had wielded a wonderful influence in the medical profession, and that medical literature had been enhanced in every way by them, and as individual societies they should be encouraged, but their union into a national congress was not conducive to the best interests of the medical profession. With the adoption of the new plan of organization, providing for a house of delegates to take charge of all business matters in the American Medical Association, more time would be provided for scientific work. He said: "The special societies, composed, as they are, of leaders in the several specialties, are under obligation to the American profession to assist in the better organization of these sections. Many of the members of these societies are officers and active.

working members of the sections of the American Medical Association, and can accomplish this result. There must be one class of membership for the section that can be held by only those who are recognized as teachers and leaders to make membership very desirable and sought after."

He suggested that this class be known as "fellows," to pay in addition to the annual dues of the association, \$5 annually for section dues, which fund would be expended in the publication of the proceedings of the section. The officers and authors of papers should be fellows, but all members could take part in discussion. Thus, an opportunity would be afforded for the ordinary members to show themselves worthy of fellowships. Such an organization of the sections, with volumes of transactions, publishing a list of the fellows, would give stability and a permanency to the section work that could scarcely be had in any other way. With the house of delegates for the general association, and the roll of fellows and association members for each of the sections, it would become the most scientific and influential medical organization the world has ever known.

Dr. Davis paid a tribute to the medical profession of the South, and spoke of McDowell, Sims, and Battey as epoch-makers in surgery. He also referred in glowing terms to the work of Dudley, Paul F. Eve, Warren Stone, Dugas and Pope. Of the many in recent years who had done excellent work, and who were now dead, he mentioned the names of McGuire, Yandell, Briggs, Rogers, Sr., Kinloch, Westmoreland, Sr., Campbell, Gilmore, Nott, Mastin and Richardson.

Memorial To Be Established.

The council presented the following resolution, which was adopted:

Whereas, Dr. W. E. B. Davis, during twelve years of faithful service as Secretary of the Association, declined to draw any salary for his services, expecting in time to establish some suitable memorial of this association with the fund created thereby; therefore, be it

Resolved, That in consideration of this fact \$2000, a sum far less than the salary offered would have amounted to, be appropriated for the establishing of a memorial in Birmingham, Ala., the birthplace of the association; and that this memorial be placed in the Charity Hospital of that city as a ward to bear the name of the association.

New Officers.

The following officers were nominated and elected for the ensuing year: President, Dr. J. Wesley Bovée, Washington, D. C.; vice-presidents, Drs. Bacon Saunders, Fort Worth, Texas, and Christopher Tompkins, Richmond, Va.; secretary, Dr. W. D. Haggard, Jr., Nashville, Tenn.; treasurer, Dr. Floyd W. McRae, Atlanta, Ga. The next place of meeting will be Birmingham, Ala.; the time: the week preceding Christmas, 1903; the chairman of the committee of arrangements: Dr. John D. S. Davis, Birmingham.

(To be continued.)

SOUTHERN MEDICAL COLLEGE ASSOCIATION.

Annual Meeting, held in Cincinnati, November 11.

At this meeting the following medical colleges and departments were represented: University of Tennessee, Nashville; University of Nashville; University of the South, Sewanee, Tenn.; Tulane University, New Orleans; Vanderbilt University, Nashville, Tenn.; Fort Worth University, Texas; Medical College of Virginia, Richmond; Tennessee Medical College, Knoxville; Medical College of Alabama, Mobile; Birmingham Medical College, Ala.; University College of Medicine, Richmond, Va.; Dallas University, Texas.

Resignation of Memphis College.

The most important business of the meeting was the consideration of the resignation of the Memphis Hospital Medical College of Memphis, Tenn., which was formally presented, and on motion, accepted. There have been differences between the main body and this college for some time that have caused serious friction. The most serious cause of disagreement was regarding the length of the course of study in this school and its indifference as to preliminary requirements.

Dr. J. S. Cain, chairman of the Executive Committee, in making his report recommended that the Memphis Hospital Medical College be permitted to withdraw from the association, because of unwillingness on the part of that school to be governed by the laws of the association.

The Memphis college usually has about 600 students, but the sentiment was practically unanimous regarding the acceptance of the resignation.

The secretary reported that only a few of the twelve colleges constituting the association had any beneficiaries, and that none of them had more than twelve, which is the maximum number that any college is allowed to take during any one session. Under this law a beneficiary is one who pays any amount less than the published rates.

Next Meeting in New Orleans.

At the afternoon session two minor amendments to the constitution were adopted, and the by-law fixing the time and place of meeting was suspended as to the next meeting, which will be held in the St. Charles Hotel, New Orleans, May 4, 1903, just prior to the meeting of the American Medical Association.

The President's Address on Preliminary Educational Requirements.

At the afternoon session Dr. Christopher Tompkins made the presidential address. It was endorsed by a vote of the association and recommended for publication. With the omission of the introduction it appears below:

After devoting some considerable thought to the subject, I am struck with the fact that the preliminary entrance requirements of the Southern Medical College Association are themselves very uncertain. It is, as you know, that of a first grade public school teacher. This I find to be quite different in the different states represented by colleges in this assembly, and indeed is not always the same in all parts throughout the same state. It depends largely on the examiner and still oftener on the custom, which happens to be very different, so that colleges in the various states represented in this association will often be able to take some of those students who in a neighboring or distant state would have to be refused by other colleges of the same association, and vice versa.

COMPARISON OF THE TWO ASSOCIATIONS.

The preliminary educational requirements of the American Medical College Association are apparently better fixed and bear more evenly on the schools than do ours. Their educational requirements in the letter of the law are undoubtedly higher than ours and it would appear at first sight that their students ought to or would be obliged to have a better preliminary education. However, this is not always the practical working of the system, as has often been impressed on every dean now present and doubtless also on those belonging to our association who are unable to be with us at this meeting. Who of us has not been called on to matriculate a student or students, from some of the northern or western schools, who has attended one or more courses of lectures and who it is very apparent has not the educational requirements not only of what is commonly known as a first grade public school teacher, but even that of a second grade public school teacher. The reason of this is that whereas the fixed requirements are high and rigid the schools themselves are permitted to examine their own students. I refer to those who can not at the time (and the number of such students is necessarily very large) furnish written evidence of such education.

In the world in which we live human nature is weak, and it is not a thing to be surprised at that very often an incompetent student who wants to be matriculated is matriculated and "conditioned," and the next fall when he offers for matriculation again, his supposed work in academic studies, taken along with his medical studies, puts him in a position when examined by the school that will enable him to go on and finish his course in medicine there or elsewhere. Our own constitution and by-laws do not permit us to examine students and pass on their preliminary requirements; on the contrary, the examination is required to be done by an outsider. See Article 4, Section 3, which reads as follows:

He must possess a diploma of graduation from some literary or scientific institution of learning, or a certificate from some legally constituted high school, general superintendent of state education, or superintendent of some county board of public education, attesting that he has been regularly examined and is possessed of at least the educational attainments required of first grade teachers of public schools or a certificate that he has passed the entrance examination to a university; and a student may be given one month, from the date of his admission to submit his certificate of qualification.

By this means our students must be up to the mark according to the law in the states in which they live. I therefore maintain that in spite of the written letter of the law requiring an undoubtedly higher preliminary education by colleges members of the American Medical College Association, these requirements, because of the manner in which they are ascertained, are liable to and do often, in fact, permit students of inferior education to enter their schools, students who would have to be and are refused by us.

At the last meeting of the American Medical College Association, held at Saratoga Springs, a motion was made to prohibit from membership in that association schools which themselves examine students applying for matriculation as to their preliminary education. This resolution was promptly voted down, showing what is to be their continued policy. In view of these facts would it not be proper for this association to consider some way or means of relieving the southern schools of the criticism of being opposed to higher preliminary academic education and at the same time endeavor in some way to rid ourselves of this undoubtedly unjust criticism. Before dismissing this subject I wish also to say something of the wording of Article 4, Section 3, already referred to.

THE LEGAL INTERPRETATION OF THE REQUIREMENT.

At a glance any one who will take the trouble to read the rule therein laid down will plainly see that it is intended to require of students applying for matriculation in medical schools as a preliminary education that of or equivalent to a first grade public school teacher. This is the particular and essential part of the section and that none who have beyond question such an education can or ought to be refused or barred admission. Such applicants, if properly qualified, if refused, in my opinion, could resort to the courts and compel admission and perhaps sue such schools for damages. After stating the broad fact that the education of a first grade public school teacher is required, there follow certain ways of determining what is at least a first grade public school teacher's education.

How any one could think that the examinations, degrees or certificates named are the only ways that such a fact could be ascertained is passing strange. Still, that has happened. I have myself obtained from the office of the Superintendent of Public Instruction an opinion as to what would in the State of Virginia constitute such an education and when a proposed student presented such written credentials I have always taken him, although these credentials may not have been identical with those suggested or mentioned in the section referred to. The matter as I understand it is referred to the superintendent of public instruction of the state in which the college is situated and what that office determines is a first grade public school teacher's education in that particular state can in no way be gainsaid. He is required to say that certain people "have been regularly examined and are possessed of, at least, the educational attainments of a first grade public school teacher." He is not required to examine them himself and is at full liberty, if he chooses, to accept an examination held by some one else. In order to avoid all question or controversy on this subject I would be glad if the association, if in its wisdom it thinks proper and desirable, takes up and passes on this matter and makes the law, if possible, even more plain than it now already is.

THE B.A. DEGREE.

At this point it would be well to say something of that part of our constitution and by-laws referring to advanced standing. See Article 4, Section 5:

The following classes of students may apply for advanced standing and obtain it, provided every applicant undergoes a satisfactory examination on every branch below the class desired to be entered:

- a. Graduates of dentistry, of pharmacy, and of veterinary medicine.
- b. Graduates and matriculates who have completed one or more courses in colleges of homeopathy and of eclectic medicine.

c. Graduates of recognized colleges and universities who have completed therein prescribed courses in elementary branches of medicine, including chemistry and biology.

The American Medical College Association has practically stricken from their constitution and by-laws this entire section and are striving to make the B.A. degree the preliminary requirement for medical study. In order to help the schools do this, a large number of the great universities of the North, and I think of the West also—and more recently the University of Virginia—have decided and published that they will hereafter allow students to count for the B.A. degree the studies of the first year in medicine. If that course is taken at the same university where they have received their previous academic education, it thereby enables a student or students to get an academic degree at the university and at the same time be advanced one year in medicine. This I regard as a great educational advantage and one that students in general ought to avail themselves of, especially as the first year in medicine can be readily taught away from the surroundings of large cities. It would, of course, cause many young men to take their first year of medicine away from the medical school in which they would eventually graduate. This, however, is a sacrifice that might be desirable for the medical schools to make for the general good. The more especially is this true, as you doubtless already know, that many of our best medical and surgical associations require an academic degree or its equivalent as well as a medical degree before a candidate is allowed to apply for membership in these associations.

Need of Uniformity in Medical Laws.

Dr. J. S. Cain's address was on the question of amalgamation of the two associations. A study of the environments had forced him to the conclusion that there is still a peculiar work for the southern association to accomplish in its individual capacity.

Dr. Bacon Saunders set forth the advantages resulting from organizations, or confederations of medical colleges.

In discussing these addresses, Dr. G. C. Savage suggested that the Confederation of State Boards of Medical Examiners could do much in establishing and maintaining a high standard of medical education. As is well known, one great object of this confederation is reciprocity; but before this can be accomplished there must be uniformity of medical laws. This confederation should establish the minimum preliminary requirements, and should also define a reputable medical college, and only graduates of such schools should be permitted to practice in any state. This would sound the death-knell of cheap-John medical colleges. When that day arrives there will be need for but one medical college association.

Election of Officers.

The following officers were elected for the ensuing year: President, Dr. Christopher Tompkins, Richmond, Va. (re-elected); vice-president, Dr. Bacon Saunders, Fort Worth, Texas; secretary and treasurer, Dr. G. C. Savage, Nashville; and executive committee, Drs. John S. Cain, Nashville, Lewis C. Morris, Birmingham, Ala., and Charles A. Mohr, Mobile.

THE INTERNATIONAL TUBERCULOSIS CONFERENCE.

Held at Berlin, Oct. 23-25, 1902.

The Secretary of State, Count v. Posadowsky, in the Chair.

The German system of insurance against disease, disability and old age among the working classes, which is participated in by the working people themselves, their employers and the state, early compelled the recognition of the advantages to be gained by sanatoria for the treatment of curable diseases, especially tuberculosis. Consequently Germany took the lead in organizing such institutions and has led the way for the whole world to follow in this line. When an international central headquarters for the struggle against tuberculosis was decided on, Germany took the lead for this reason and the international central committee fixed its offices at Berlin. It was even expressly stated in the by-laws that the foreign members of the committee "must reside in Berlin." This last clause was stricken out at the recent meeting and a resolution was adopted that foreign members of the committee

would be reimbursed for their expenses when summoned to an official conference. The International Tuberculosis Conference held at Berlin in October was the first official gathering of the members of the supreme council of this international central bureau organized at the Antituberculosis Congress at London last year. Each country sent its delegates to describe what has been accomplished in the way of general prophylaxis and learn the work being done in other lands. About 100 members were present, a notable gathering of men of wide renown, but only one American, Dr. Eager, representing the Marine-Hospital Service, stationed at Naples.

Transmissibility of Bovine Tuberculosis to Man.

There were only a few strictly scientific communications and no new ideas were presented, the main interest centering in the discussion as to the transmissibility of bovine tuberculosis to man. Each side was more positive in its assertions than ever, Koch maintaining still more emphatically the rarity of such transmission in view of the fact of the almost universal opportunities for it. He also affirmed that boiling does not destroy the bovine tubercle bacillus. The arguments for the intercommunicability of bovine and human tuberculosis by Nocard, Baumgarten, Arloing and others have been reviewed in THE JOURNAL during the last few months and no new facts were adduced except those previously published. Koch reiterated that the sole danger of tuberculosis resides in the patient.

Necessity of Isolation.

B. Fraenkel declared that the prophylaxis of tuberculosis depends on the isolation of tuberculous subjects, proclaiming that the most robust person would inevitably contract tuberculosis if a virulent culture of Koch's bacilli were subcutaneously injected. On the other hand, the most poorly nourished and predisposed subjects would never have the disease if absolutely protected against all contact with the bacilli.

Model Sanatoria.

Some of the model German sanatoria were inspected and aroused enthusiasm. The halls of the Parliament buildings, where the meetings were held, were devoted to an exposition of appliances and measures connected with the campaign against tuberculosis.

Calmette of Lille described the active crusade being carried on in his region by special tuberculosis dispensaries, supervision of the patients in their homes and an educational propaganda by workmen trained for the purpose. A house-to-house crusade is carried on and the rooms of each consumptive when located are washed with chlorid of lime and whitewashed at regular intervals, while the patients are supplied with clothing, bedding, cuspidors and a quart of lysol every week, and steam laundering is supplied at a low rate. The children are sent to a seashore sanatorium. The fact is especially impressed on the consumptives that their sputa is as dangerous to themselves as to those around them as possible sources of new infection. These measures have been applied at Lille for nearly two years, and the results have surpassed all expectations. Numbers of the tuberculous subjects supervised for one to nine months have been clinically cured and resumed work. The expense is borne mainly by private contributions. Italy is introducing a similar system of dispensaries and home supervision. The Norwegian delegate said that compulsory notification of cases of tuberculosis had been enforced since Jan. 1, 1901, and that it had proved feasible and not disturbing. The delegate from Belgium, Dr. Van Rynn, cited the experience at New York as confirming the benefits of notification.

Brouardel of Paris was appointed chairman of the international central committee, which is to meet every spring. With him are associated Andvord of Christiania, Broadbent and Raw of London, Dewez of Mons, Espina y Capo of Madrid, Fraenkel, Althoff and Von Leyden of Berlin, Linroth of Stockholm, Maragliano of Genoa, Scherwinsky of Moscow, Von Schrötter of Vienna, Calmette of Lille, Chyger of Budapest and Rördam of Copenhagen. Pannwitz of Berlin is the general secretary. The second conference will be held at Paris in 1904.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Cyclic Vomiting.

Le Roy, in *Ther. Gaz.*, states that he has tried almost every known measure and drug in these cases and he has obtained the best results from the following combination given at the beginning of the attack:

R. Pulv. aloes et myrrh	3ii	8
Pulv. guaiaci	5iiss	6
Pulv. capsici	5i	4

M. By triturating in a porcelain mortar to an impalpable powder and add a few drops of the oil of cinnamon. Fiant capsulae No. xxiv. Sig.: One capsule every four hours until the bowels move freely.

Hemorrhage from the Nose or Throat.

The following combination is of great service in checking severe forms of epistaxis either from eroded vessels when the cartilaginous portion is destroyed or following operations on the nose or throat:

R. Acidi tannici	3iv	16
Acidi gallici	3iii	12
Glycerini	3ii	8
Aq. destil.	5i	30

M. Sig.: To be used locally by means of a swab or saturate a piece of sterilized gauze and introduce into the nares anteriorly or through the nasopharynx.

Bronchitis from Adenoids.

Méry, according to an abstract in *Amer. Med.*, states that the inflammation of the nasopharynx which exists in patients suffering from adenoids may spread to the bronchi and give rise to a severe bronchitis, accompanied by signs of emphysema. The curative treatment is removal of the adenoid vegetations. He recommends the following medication in addition:

R. Syr. ipecac.	3iiss	10
Sodii benzoatis	gr. xv	1
Sodii bicarb.	gr. viii	50
Syr. polygala (senega)	5v	20
Decoct. polygala	5iv	120

M. Sig.: One teaspoonful every hour.

Mustard poultices should be applied to the chest and hot drinks given; morning and evening a small quantity of the following pomade should be introduced into the nares by means of an applicator:

R. Acidi borici	5i	4
Resorcin	gr. iii	20
Vaselini	5i	30

M. Sig.: Apply locally. The patient's mouth must be closed; he will then draw the pomade through the nose. Instead of the introduction of the foregoing a few drops of mentholated oil, 1 to 100, may be used in the form of a spray. Later stimulating expectorants such as terpin hydrate in doses of one-half to one grain will be of use.

During convalescence one to two teaspoonfuls of the following may be taken every morning:

R. Sulphuris sublim.	3iiss	10
Mellis rosæ	3iii	90

M. Sig.: One to two teaspoonfuls in the morning.

Bronchitis and Rhinitis.

H. C. Howard of Champaign, Ill., recommends the following antiseptic combination in the treatment of different affections of the bronchial passages:

R. Formalin	3ii	8
Spts. chloroformi.	5i	4
Alcoholis	5i	30
Ol. geranii	m. xx	130

M. Sig.: To be dropped on absorbent cotton and inhaled several times a day. This may be carried around in one's pocket in a small tin box containing absorbent cotton saturated with the solution, as recently suggested by the Chicago

Department of Health. The effects of the formalin on the mucous membranes can be quickly detected, and its antiseptic value can not be doubted.

Infantile Bronchitis.

Debove, in *Prog. Medical*, recommends the following:

R. Syr. lactucarii 5v 20|
Syr. adianti,
Syr. papaveris (poppy), āā.....5iiss 45|

M. Sig.: From four to six teaspoonfuls daily; or:

R. Syr. lactucarii 5v 20|
Syr. belladonnæ
Syr. aurantii flor., āā.....3ii 8|
Syr. tolutani 5i 30|

M. Sig.: From four to six teaspoonfuls daily.

Chronic Bronchitis.

The following combination is recommended by E. Fletcher Ingals to relieve the cough in chronic bronchitis when opiates are not contra-indicated.

R. Morph. sulph. gr. i 06
Ammon. carb. gr. xxx-xl 2-2 65
Syr. pruni virg.
Mist. glycyrrhizæ comp., āā.....5iv 16|

M. Sig.: One teaspoonful in water to relieve the cough; or:

R. Terpin hydratis gr. ii 12
Ext. cannabis ind. gr. 1/20 003
Codeinæ gr. 1/8 008
Ol. menth. pip. gtt. ss 03
Sacchari albi gr. iii 20|

M. Ft. capsula No. i. Sig.: One every four hours until the cough is relieved.

Pneumonia.

E. Aufrecht, in *Nothnagel's Encyc. of Med.*, states that he uses quinin and iron in every case. For adults he prescribes the following:

R. Quininæ hydrochlor. gr. xv 1|
Ferri sulph. gr. xlv 3|
Pulv. glycyrrhizæ rad. gr. lii 3/50|

M. Ft. capsula No. xl. Sig.: Two capsules twice a day.

For children he recommends the following:

R. Quininæ hydrochlor.
Ferri sulph., āā.....gr. xxii 1/5
Pulv. glycyrrhizæ gr. xv 1|
Ext. glycyrrhizæ q. s.

M. Ft. pil. No. xxx. Sig.: Take two or three pills daily, according to age.

Burns.

Biddle, in *Penn. Med. Jour.*, states that 50 per cent. of the deaths following burns is caused by the shock. He recommends keeping the circulation and nerve centers in the best possible condition. To do this he advises strychnin, digitalis, whiskey, and aromatic spirits of ammonia in full doses with a good nutritious diet. In order to control the pain and delirium and to procure the necessary amount of rest he recommends the following:

R. Pot. bromidi gr. xx 1/30
Chloralis hydratis gr. vi 35
Elix. simplicis q. s. ad.....5ss 15|

M. Sig.: To be taken at one dose and repeated as necessary.

Normal Saline Solution.

Heinick, in *Med. Age*, states that the employment of the normal saline solution as an infusion is as specific in its field of usefulness as any drug at our command. It can be prepared easily and with sufficient accuracy by dissolving a teaspoonful of salt in a pint of sterilized water. He recommends it in the following conditions:

As an inexpensive cleansing spray in chronic hypertrophic rhinitis.

In diphtheria great relief is obtained by using a hot, normal salt solution in the form of an irrigation.

In skin grafting and to douche the skin grafts previous to transplanting them the saline solution should be used.

As an irrigating fluid for wounds, to irrigate the urinary bladder, and in diarrheal conditions it can be used per rectum intravenously or subcutaneously.

In speaking of the use of the normal salt solution in cystitis, the following formula may be used advantageously in infections of the bladder:

R. Formalin m. vi-x 35-65
Sodii chloridi 5i 4|
Aq. destil. q. s. 3xvi 500|

M. Sig.: To be used in irrigating the bladder, preferably with a double flow catheter.

It is used also in the treatment of burns, in shock or collapse from large hemorrhages and as a vehicle for nutrient enemata. In administering it per rectum a long rectal tube should be introduced after a cleansing enema and elevation of the bed. In giving it subcutaneously a region should be selected where the cellular tissue is loose and easily distensible, such as the axilla, the buttocks, the subscapular region or the abdominal wall. The site of the injection must be thoroughly sterilized as well as the receptacle containing the solution, and it should be introduced at a temperature of 105 to 115 F.

Gastralgia in Children.

The *Progrès Medical* recommends the following in the gastralgias of children:

R. Tinct. belladonnæ
Tinct. calumbæ
Tinct. arnicæ
Tinct. opii camph., āā 3i 4|

M. Sig.: From five to ten drops in a little sweetened water.

Medicinal Treatment of Tuberculosis.

Errico de Renzi, according to an abstract in the *Interstate Med. Jour.*, states that while not denying the importance of the hygienic treatment of tuberculosis, the medicinal treatment should not be overlooked. He uses ichthyol in his clinic in a great variety of cases, and some of them well advanced. The most notable and most constant effect was the diminution of the bronchial catarrh. This diminution showed itself in the lessened amount of sputum and the partial disappearance of râles. Secondly an increase in weight and an improvement in the general condition was noted. One advantage of ichthyol, according to the author, is that it can be used for long periods of time without unpleasant secondary effects. It may be used with success in cases of threatening or actual hemoptysis on account of its vasomotor-constrictor effects. He believes that this preparation should be given a thorough trial in all cases not too far advanced.

The following formula is recommended:

R. Ichthyol 5iiss 10|
Aq. menth. pip. 5iiss 75|
Syr. aurantii 3v 20|

M. Sig.: During the first week one teaspoonful in a glass of water is given daily, half being drunk in the morning and the remainder in the evening. During the second week two teaspoonfuls in two glasses of water are given daily. The dose is gradually increased in this manner until drams two (8.00) are taken daily.

Ichthoform may be substituted, given in powders of grains one and a half (.09) to grains four and a half (.30), ten powders being given daily. Its action resembles very much that of ichthyol and seems to have a more favorable effect on the bowel disturbance, which frequently accompanies tuberculosis, making a greater ingestion and assimilation of food possible.

He recommends sodium salicylatis for its antipyretic effects, given in doses of grains fifteen (1.00) followed by a glass of water. From four to eight doses may be given daily. This preparation may be used steadily for months to control the fever, and whenever its administration is interrupted the fever rises.

Medicolegal.

Validation of Imperfect Registration Retroactive.—The decision holding the validation of imperfect registration not retroactive, reported on page 59 of THE JOURNAL of January 5, 1901, has been reversed by the Court of Appeals of New

York; case of *Ottaway vs. Lowden*. Section 148 of Chapter 661 of the New York Laws of 1893 provides, among other things, that: "If any person, whose registration is not legal because of some error, misunderstanding or unintentional omission, shall submit satisfactory proof that he had all requirements prescribed by law at the time of his imperfect registration and was entitled to be legally registered, he may, on unanimous recommendation of a state board of medical examiners, receive from the regents under seal a certificate of the facts which may be registered by any county clerk and shall make valid the previous imperfect registration." The physician by whom this action was brought to recover for medical services had attempted to make registration as required by the statute, and failed; but, assuming that he was correctly registered, he proceeded with the practice of medicine, in the course of which he rendered the services sued for. A short time thereafter he obtained from the regents a certificate which made valid the previous imperfect registration. This validation, it was held, in the decision now reversed, was not retroactive and did not authorize the maintenance of this action. But the court of appeals is persuaded that the statute operated to give life to the imperfect certificate from the date of its filing, and hence authorized the physician to recover for all services rendered after its filing, and freed him from the various misdemeanors as well. It says that the object of the comprehensive statutes of which the section quoted from forms a part is not to provide a trap for the bona fide and competent physician who, through inadvertence or ill advice, fails to secure a perfect registration, but to shut out from the practice of medicine those whose lack of knowledge of the human body and ignorance touching methods of treatment render their attempts to make diagnosis and prescribe treatment a menace to society. Not only is the standard very high for those who are admitted to the practice of the profession by the authorities of this state, but the statutes attempt to guard against any practicing in this state by unskilful and improper practitioners coming from sister states, showing throughout an intent on the part of the legislature to protect the people from imposition by the unlearned and unskilful who may nevertheless obtain from institutions in other states diplomas purporting to assure competency. To that end the certificate of the board of regents, based on the unanimous recommendation of a board of medical examiners, is exacted, and the requirements of license and registration are insisted on, and not for the purpose of bringing within the penalties of the statutes a physician coming from another state, possessed of all the qualifications which the statutes require. As experience teaches that mistakes are sometimes made in attempting to comply with statutes—especially by those whose training may be in other directions than the law—the legislature has undertaken to provide a method by which imperfect registration may be corrected by the same authorities who acted in the first instance; and as the object of the section authorizing the correction is only to make such corrections as are due to "some error, misunderstanding or unintentional omission," there is no good reason why the legislature should not provide that the correction shall operate as of the date when the "imperfect registration" took effect, thus wiping out the penalties which the statute imposed to better secure its enforcement. And the phrase, "shall make valid the previous imperfect registration," as it seems to the court, when considered in connection with the general scheme of the statute, and the fact that all of the applicant's proofs must go to show that he was entitled to be registered at the time of his imperfect registration, means that that which was once imperfect and invalid shall become perfect and valid as of the beginning.

England and Wales—Midwives' Act, 1902.—In this act, which is entitled "An act to secure the better training of Midwives, and to regulate their practice," it is provided, among other things, that the president of the council shall take steps to secure the formation of a central midwives' board, which shall consist of: 1, four registered medical practitioners, one to be appointed by the Royal College of Physicians of London, one by the Royal College of Surgeons of England, one by the Society of Apothecaries, and one by the Incorporated Midwives'

Institute; 2, two persons (one of whom shall be a woman) to be appointed by the president of the council; 3, one person to be appointed by the Association of County Councils; 4, one person to be appointed by the Queen Victoria's Jubilee Institute for Nurses, and 5, one person to be appointed by the Royal British Nurses' Association. The duties and powers of the board shall be: 1, to frame rules regulating their own proceedings, the issue of certificates and the conditions of admission to the roll of midwives, the course of training and the conduct of examinations and the remuneration of the examiners, the admission to the roll of women already in practice as midwives at the passing of this act; regulating, supervising and restricting within due limits the practice of midwives; deciding the conditions under which midwives may be suspended from practice; defining the particulars required to be given in notifications of practice; 2, to appoint examiners; 3, to decide on the places where, and the times when examinations shall be held; 4, to publish annually a roll of midwives who have been duly certified under this act; 5, to decide on the removal from the roll of the name of any midwife for disobeying the rules and regulations from time to time laid down under this act by the Central Midwives' Board, or for other misconduct, and also to decide on the restoration to the roll of the name of any midwife so removed; 6, to issue and cancel certificates. And generally to do any other act or duty which may be necessary for the due and proper carrying out of the provisions of this act. Rules framed under this section shall be valid only if approved by the Privy Council, and the Privy Council, before approving any such rules, shall take into consideration any representations which the General Medical Council may make with respect thereto. Any woman thinking herself aggrieved by any decision of the Central Midwives' Board removing her name from the roll of midwives may appeal therefrom to the High Court of Justice within three months after the notification of such decision to her; but no further appeal shall be allowed. A copy of the roll of midwives, purporting to be printed by the authority of the board or to be signed by the secretary to the board, shall be evidence in all courts that the women therein specified are certified under this act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not certified under this act. Every council of a county or county borough throughout England and Wales shall be the local supervising authority over midwives within the area of the said county or county borough. It shall be the duty of the local supervising authority: 1, to exercise general supervision over all midwives practicing within their area in accordance with the rules to be laid down under this act; 2, to investigate charges of malpractice, negligence or misconduct on the part of any midwife practicing within their area, and should a prima facie case be established, to report the same to the Central Midwives' Board; 3, to suspend any midwife from practice, in accordance with the rules under this act, if such suspension appears necessary in order to prevent the spread of infection; 4, to report at once to the said board the name of any midwife practicing in their area convicted of an offense; 5, during the month of January of each year, to supply the secretary of the Central Midwives' Board with the names and addresses of all midwives who, during the preceding year, have notified their intention to practice within their area, and to keep a correct copy of the roll of midwives, accessible at all reasonable times for public inspection; 6, to report at once to the Central Midwives' Board the death of any midwife or any change in the name or address of any midwife in their area, so that the necessary alteration may be made in the roll; 7, to give due notice of the effect of the act, so far as practicable, to all persons at present using the title of midwife. The local supervising authority may delegate, with or without any restrictions or conditions, as they may think fit, any powers or duties conferred or imposed on them by or in pursuance of this act to a committee appointed by them and consisting either wholly or partly of members of the council. A county council may delegate, with or without any restrictions or conditions, as they may think fit, any power or duties con-

ferred or imposed on them by or in pursuance of this act to any district council within the area of the county, and the powers and duties so delegated may be exercised by a committee appointed by such district council and consisting either wholly or partly of members of the district council; and women shall be eligible to serve on any such committee. This act also contains provision, among other things, against the use, after April 1, 1905, under penalty, of the name or title of midwife by any woman not certified under this act; that, after April 1, 1910, no woman shall, under penalty, habitually and for gain, attend women in childbirth otherwise than under the direction of a qualified medical practitioner unless she be certified under this act; no woman certified under this act shall employ an uncertified person as her substitute; the certificate under this act shall not confer on any woman any right or title to be registered under the medical acts or to assume any name, title or designation implying that she is by law recognized as a medical practitioner, or that she is authorized to grant any medical certificate, or any certificate of death or of still-birth, or to undertake the charge of cases of abnormality or disease in connection with parturition. The act also contains special provisions for existing midwives; with regard to fees and expenses; penalty for obtaining a certificate by false representation, and for the wilful falsification of the roll. Except as otherwise provided therein, it is to come into operation April 1, 1903. But it does not extend to Scotland or Ireland. And nothing in this act respecting midwives shall apply to legally qualified medical practitioners.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine (Philadelphia), November 8.

- 1 *A Further Contribution to the Subject of Vasomotor Ataxia. Solomon Solis Cohen.
- 2 The Asylum, the Hospital for the Insane, and the Teaching of Psychiatry. Stewart Paton.
- 3 *Kernig's Sign: Its Frequency of Occurrence, Causation and Clinical Significance. Robert D. Rudolf.
- 4 The Oxygen Bath for the Peritoneum and Its Possible Value. Second Report on the Cancer Case Relieved by an Exploratory Laparotomy. Eugene R. Corson.
- 5 *The Determination of the Acid Factors of the Gastric Fluid. Charles Platt.
- 6 Congenital Hernia of the Liver into the Umbilical Cord, with Report of a Case. J. W. Bullard.
- 7 Medical London in Summer. Nicholas Senn.

Medical News (N. Y.), November 8.

- 8 *Treatment of Congenital Dislocation of the Hip. Royal Whitman.
- 9 *The Etiology of Smallpox; with a Special Reference to Its Microbiology and a Demonstration of Its Microbe. William S. Magill.
- 10 A Modified Method of Auscultatory Percussion. Albert Abrams.
- 11 *Symptoms, Diagnosis and Complications of Gonorrhea. Abraham L. Wolbarsht.
- 12 The Use of Salicylate of Sodium in the Treatment of Pneumonia. A. Frank Taylor.

Philadelphia Medical Journal, November 8.

- 13 A Memoir of J. M. DaCosta, M.D., LL.D. J. C. Wilson.
- 14 *A Year's Work at the White Haven Sanatorium of the Free Hospital for Poor Consumptives. Lawrence F. Flick.
- 15 A Case of Stammering; with Exhibition of Patient. G. Hudson Makuen.
- 16 Report of Recent Advances in Gynecology. Matthew D. Mann.
- 17 The Treatment of Placenta Previa; Is Cesarean Section Justifiable? Robert A. Murray.
- 18 *Suppurative Tubal and Ovarian Disease. J. J. Gurney Williams.
- 19 *Movable Kidney; Its Diagnosis and Treatment. Robert J. Reed.

Boston Medical and Surgical Journal, November 6.

- 20 *A Clinical Study of 135 Cases of Empyema. Based upon the Bacteriological Findings in the Exudate. Charles F. Withington.
- 21 *Round Shoulders and Faulty Attitude: A Method of Observation and Record, with Conclusions as to Treatment. Robert W. Lovett.
- 22 The Actinic Rays. Edward A. Tracy.
- 23 Segmented Ring for Intestinal Anastomosis. Francis B. Harrington.
- 24 Tumor in the Region of the Hypophysis. E. W. Taylor and G. A. Waterman.

New York Medical Journal, November 8.

- 25 *Pathology and Treatment of Epilepsy. William H. Thomson.
- 26 *Suggestions Favoring a Standard of Technique in Operative Surgery. Edward W. Lee.

- 27 *The Relationship Lues Bears to the Body Politic. S. P. Collings.
- 28 Climate and Electric Peculiarities of Colorado Favoring Recovery in Pulmonary and Other Diseases. J. E. MacNeill.
- 29 *Diseases Preceding and Following the Abuse of Alcohol. T. D. Crothers.
- 30 Subcutaneous Injections of White of Egg. Holmes C. Jackson.

Medical Record (N. Y.), November 8.

- 31 *The Diagnosis of Surgical Diseases of the Kidney Accompanied by Pyuria. Ramon Guitéras.
- 32 *The Treatment of Acute Dysentery. J. Dickson Hunter.
- 33 A Table of the Differential Diagnosis of Coma; with Report of a Case of Fracture of the Base of the Skull, Intracranial Hemorrhage and Compression of the Brain, Diagnosed by Symptoms Alone; Trephining; Recovery. Sinclair Tousey.
- 34 Educational Limitation of Venereal Diseases. Ferd. C. Valentine.

St. Louis Medical Review, October 25.

- 35 *Treatment of Typhoid Fever with Castor Oil. C. C. Bass.

Cincinnati Lancet-Clinic, November 8.

- 36 A Few Clinical Considerations on Infantile Eczema. A. Ravogll.
- 37 The Ups and Downs of a Physician's Life. (Continued.) George J. Monroe.
- 38 Some Remarks on the Treatment of Intestinal Pains. N. H. Kassabian.
- 39 Surgery of Prostate, Pancreas and Diaphragm. (Continued.) B. Merrill Ricketts.

Medical Fortnightly (St. Louis), October 25.

- 40 Smallpox. John M. Batten.
- 41 Rheumatic Neuritis; Neurasthenia—Report of a Case. John J. Taylor.
- 42 *The Relationship Lues Bears to the Body Politic. S. P. Collings.
- 43 Climate and Electric Peculiarities of Colorado Favoring Recovery in Pulmonary and Other Diseases. J. E. MacNeill.
- 44 *The Methods of Using Argrol. A. C. Barnes.

Medical Age (Detroit, Mich.), October 25.

- 45 Tubal Pregnancy; Rupture at an Early Period of Gestation. Grant G. Speer.
- 46 A Peculiar Volvulus of the Colon. Geo. B. Gesner.
- 47 Obstacles to a Satisfactory Classification of Disease. A. L. Benedict.

Pediatrics (N. Y.), November 1.

- 48 The After-Treatment of Erosion of the Knee-Joint. Joseph Collier.
- 49 A Note on the Operative Treatment of Flail Paralytic Elbow. Robert Jones.
- 49½ Infantile Mortality. E. M. Brown.

Journal of Nervous and Mental Diseases (N. Y.), November.

- 50 * * * * * pertrophy Following Infantile Cerebral
 * * * * * re Clark.
- 51 * * * * * unique to Counteract the Vasomotor
 * * * * * Disease. Harvey Cushing.
- 52 * * * * * Cases of Peculiar Motor Manifestations
 * * * * * in the Insane. H. A. Tomlinson.
- 53 A Case of Unusual Cerebral Hemorrhage. O. T. Osborne.

Medicine (Detroit, Mich.), November.

- 54 * * * * * of the Orbit. C. A. Veasey.
- 55 * * * * * Fever. Roland G. Curtin.
- 56 * * * * * ominal Pain in Typhoid Fever. Her-
 * * * * * man B. Allen.
- 57 Acetozone in Typhoid Fever. W. A. Evans.
- 58 Importance of Early Treatment of Convergent Squint. Eugene R. Lewis.

American Journal of the Medical Sciences (Philadelphia), November.

- 59 *On Splenic Anemia. William Osler.
- 60 *The Role of the Toxins in Inflammations of the Eye: Being an Essay to Which Was Awarded the Boylston Prize. Robert L. Randolph.
- 61 *Osteitis Deformans and Hyperostosis Cranii—A Contribution to their Pathology, with a Report of Cases. Morton Prince.
- 62 *Certain Characteristics of Osteitis Deformans. Reginald H. Fitz.
- 63 *Various Operative Procedures for the Relief of Chronic Suppurative Otitis Media and Their Comparative Value. Edward S. Dench.
- 64 *The Entrance of Air into the Veins. H. A. Hare.
- 65 The Relation of the Thyroid Gland to Marasmus. William Royal Stokes, John Ruhrah and C. W. G. Rohrer.
- 66 *The Anatomy of the Operation of Reaching the Ethmoid Cells Through the Antrum. Harris P. Mosher.
- 67 *Typhoid Fever in Children of Two and a Half Years and Under. J. P. C. Griffith and Maurice Ostheimer.
- 68 Clinical Observations on Congenital and Acquired Transposition of the Viscera. James K. Arnell.

Toledo Medical and Surgical Reporter, November.

- 69 Suggestions Concerning Our Library. Harrison Hathaway.
- 70 Report of Two Cases of Empyema. Christian Storz.
- 71 The Etiology and Prevention of Typhoid Fever. W. D. Stewart.
- 72 Physical Prostration. Henry O. Bliss.

Bulletin of the Johns Hopkins Hospital (Baltimore), October.

- 73 The Genesis of Glioma Retina in Neuroglia. Brown Pusey.
- 74 Note on a Case of Infection by Bacillus Aerogenes Capsulatus, in Which the Organism was Demonstrated in the Circulating Blood During Life. Rufus I. Cole.
- 75 An Observation Showing That the Flagella of the Malarial Parasite Are Fertilizing Elements. John T. Moore.

- 76 *Gonorrheal Endocarditis with Cultivation of the Specific Organism from the Blood During Life. Norman M. Harris and William B. Johnston.
- 77 A Case of Tabetic Vertebral Osteo-arthritis, with Radiograph. W. B. Cornell.
- Medical Standard (Chicago), November.
- 78 Practical Dietetics. A. L. Benedict.
- 79 A Medical Clinic. William F. Vaughn.
- 80 The Commoner Diseases of the Eye: How to Detect and How to Treat Them. Casey A. Wood and Thomas A. Woodruff.
- 81 Dispensing by Physicians. C. S. N. Hallberg.
- 82 Landmarks of the Tractus Genitalis. Byron Robinson.
- 83 When to Operate in Appendicitis; Two Illustrative Cases Operated on by Dr. B. Brindley Eads. A. B. Cook.
- 84 Pain and Its Indications. E. C. Hill.

Buffalo Medical Journal, November.

- 85 Secondary Traumatic Insanity. Sydney A. Dunham.
- 86 *The Methods of Using Argyrol. A. C. Barnes.
- 87 *Tuberculosis of the P... Mansperger.
- 88 *Surgical Tuberculosis... of Erie—1800-1900. William W. Potter.

Illinois Medical Journal (Springfield), November.

- 90 *Some Points in the Prevention and Management of Post-partum Hemorrhage. C. S. Bacon.
- 91 The Neurologic Diagnosis of Traumatic Lesions of the Spinal Cord. Frank P. Norbury.
- 92 Spinal Injuries. Carl E. Black.
- 93 Movable Kidney. L. Brannon.

Carolina Medical Journal (Charlotte, N. C.), October.

- 94 ... from the Standpoint of a General Practitioner.
- 95 ... Ophthalmia. Warwick M. Cowgill.
- 96 The Doctor, the Patient and the Importance of Good Roads to Both. M. Eugene Street.
- 97 Report of Treatment of Cases of Neurasthenia. T. W. Keown.

Ophthalmic Record (Chicago), October.

- 98 *Etiology and Treatment of Glaucoma. W. Schoen.
- 99 *The New Surgical Treatment of Glaucoma. Henry LaMotte.

Dominion Medical Monthly (Toronto), October.

- 100 *Presidential Address, Canadian Medical Association. Francis J. Shepherd.
- 101 *Chauvinism in Medicine—Address in Medicine, Canadian Medical Association. William Oster.
- 102 The Contribution of Pathology to Surgery. John Stewart.

Clinical Review (Chicago), November.

- 103 *The Etiology of Chronic Nephritis. J. M. Patton.
- 104 *Treatment of Chronic Nephritis. I. N. Danforth.
- 105 Clinical Lectures upon the Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.
- 106 Cases of Congenital Dislocation of the Hip-Joint. Adolph Lorenz.

Oklahoma Medical News-Journal (Oklahoma City), November.

- 107 Sanitation. R. D. Long.
- 108 Clinical Studies of Aspirin. Dr. Liron.

The Journal of Tuberculosis (Asheville, N. C.), October.

- 109 *Are Meat and Milk a Source of Seed Supply for Human Tuberculosis? Lawrence F. Flick.
- 110 Light—Its Therapeutic Importance in Tuberculosis as Founded upon Scientific Researches. (Continued.) J. Mount Bleyer.
- 111 *Ichthyol in Tuberculosis. John Hey Williams.
- 112 *The Diazo-Reaction: Its Value as a Prognostic Sign in Pulmonary Tuberculosis. Charles R. Upson.
- 113 *Tuberculin Obtained from the Bovine Tubercle Bacilli Contrasted with Tuberculin Obtained from the Human Tubercle Bacilli, in Their Effects on Human Patients. Clement A. Penrose.
- 114 The Etiology of the Inductive and Incipient Stages of Pulmonary Tuberculosis and Specific Treatment Based Thereon. Thomas N. McLean.

Pacific Medical Journal (San Francisco), October.

- 115 Circumcision: A Consideration of the Subject, with New Methods of Treatment of the Infant and Adult. S. F. Long.
- 116 An Interesting Case of Intestinal Perforation in Typhoid Fever Complicated by Appendicitis; Operation; Recovery. Winslow Anderson and H. D'Arcy Power.
- 117 ... of Larynx and Trachea, Involving the Esophagus.
- 118 ... Gross.
- 119 ... Pathology, Symptomatology and and Venereal Diseases George I. Blum.

Brooklyn Medical Journal, November.

- 120 Carcinoma of Cardiac Orifice of Stomach. J. Richard Kevin.
- 121 Fracture of the Skull; Importance of Early Operation. Calvin F. Barber.
- 122 Cerebrospinal Meningitis. Henry T. Hotchkiss.
- 123 The Differential Diagnosis of Multiple Sclerosis. B. Onuf.

The Laryngoscope (St. Louis), October.

- 124 *Post-Operative Management of Intranasal Surgery. M. A. Goldstein.
- 125 *Symptoms and Treatment of Chronic Empyema of the Sphenoidal Sinus. Frank W. Hinkel.
- 126 *Scarlatinal Perforations of the Pillars of the Fauces. Thomas Hubbard.
- 127 A Case of Incised Wound of the Larynx. F. E. Hopkins.
- 128 Abductor Paralysis of the Larynx. D. J. Gibb Wishart.
- 129 *The Effect of Climate on Laryngeal Tuberculosis with Special Reference to High Altitudes. Robert Levy.

International Journal of Surgery (N. Y.), November.

- 130 Gant's Femoral Osteotomy. A. R. Shands.
- 131 Remarks on the Advantages and Disadvantages of Mechanical Pelvic Drainage in Women. J. Wesley Boyce.
- 132 Nose and Throat Work for the General Practitioner. (Continued.) George L. Richards.
- 133 *The Webster-Baldy Operation for Retrodisplacement of the Uterus. Charles R. Robins.
- 134 The Technique of Amputations. R. H. Cowan.
- 135 The Surgical Assistant. (Continued.) Walter M. Brickner.
- 136 The Treatment of Chronic Leg Ulcers. Julius Schiller.
- 137 A Case of Benign Ulceration of Rectum with Unusual Features. Linn A. Kelly.

Canada Lancet (Toronto), November.

- 138 *On the Importance of Early Operation on the Gall Bladder. Dudley P. Allen.
- 139 *Virchow. J. J. MacKenzie.
- 140 The Surgeon on Horseback. S. M. Hay.

Memphis Medical Monthly, November.

- 141 Quinain in Malaria. J. B. McElroy.
- 142 Abdominal Surgery. G. W. Penn.
- 143 Remote Results of Operations Performed upon the Frontal and Maxillary Sinuses. Marcel Lermoyez.
- 144 The Value of History-Taking in General Practice. Raymond Wallace.

Maryland Medical Journal (Baltimore), November.

- 145 A Case of Ulcerative Streptococcal Colitis Causing Blood Casts of the Large Intestine. Harvey G. Beck.
- 146 Permanent Left Hemianopsia, Sequel of Puerperal Eclampsia. Hiram Woods.

1. Vasomotor Ataxia.—By this term Cohen understands a fundamental disorder, out of which, through the incidence of varying exciting causes, various syndrome groups may be developed. The cases are characterized by such symptoms as dermographism, vasomotor disturbances like exaggerated blushing, local congestion, angiomas, special sensitiveness to weather, refractive errors, emotionalism, etc. For description of cases he refers to previous communications and to the recent observations of Savill on a subgroup manifesting acroparesthesia and acroasphyxia. Attention is called to the instability of the controlling apparatus of the vasomotor nerves in the defective reaction of the individual toward environmental changes, so that they show on slight provocation various symptoms which in normal individuals require some more pronounced causes. These phenomena depend on irregular and sometimes widely-distributed contractions and dilations of the capillaries and smaller arteries and veins, and may be divided into three classes: 1. Those dependent on extensive relaxation; 2, those dependent on extensive constriction, and 3, those in which the phenomena of both are intermingled. The last is the most common. Graves' disease represents the extreme type from the phenomena of excessive dilation, Raynaud's that of the opposite, though there are many variations between the two, such as urticaria, angioneurotic edema, migraine of the spastic type and migraine of the parietic type, anomalous eruptions, drug idiosyncrasies, hay fever, asthma, intermittent albuminuria, petechia, minute cutaneous angiomas, paroxysmal tachycardia, etc. As definite exciting causes and definite toxico-pathologic mechanisms are determined, definite nosologic groups may be separated, and certain syndromes like those of Graves and Raynaud be made into diagnostic entities. Over and above these—and this is the most practical issue of these observations—there are many vague and ill-defined conditions arising in response to any one of the number of different stimuli, like weather, temperature, etc. They may vary in some individuals at different times and be manifested in the course of various acute and chronic diseases, confusing the diagnosis. With the conception of vasomotor ataxia the symptoms clear up and treatment can be instituted. Hysteria, neurasthenia and epilepsy have a close, but as yet undetermined, relation to the condition. The symptoms of the menopause are essentially vasomotor ataxic in character. Essential vasomotor ataxia is usually congenital, often affecting several members of a family, but sometimes acquired, following disease or accident. The treatment is largely dietetic and hygienic, with such medication and other therapy as the conditions seem to indicate.

3. Kernig's Sign.—Rudolf has examined for this in 162 cases and found it present in a number of conditions and also in healthy individuals. He does not disregard, however, its pathogenic significance, and offers the following conclusions:

"1. Inability to passively extend the knee fully while the thigh is at right angles to the body, i. e., Kernig's sign, was present in over 60 per cent. of all hospital patients examined. 2. Kernig's method is to place the patient in a sitting posture and then extend the knee. A more convenient way of applying the same test is that mentioned by Osler, in which the patient is kept recumbent and the thigh is placed at right angles to the body and then the knee is extended. 3. A procedure having advantages over both of these methods is first to extend the knee fully, then flex the thigh on the pelvis and measure the angle at the hip. Thus only one angle requires to be gauged instead of two, and hyperextension of the hip (showing muscular hypotonus) can be measured. 4. There is a great proneness in meningitis to increased muscular tonus, which is most apparent in the muscles of the neck and in the hamstrings. This hypertonus, occurring in meningitis, is probably due to cerebellar irritation, and conversely cerebellar irritation is probably the explanation of Kernig's sign in meningitis. 5. Inability to extend the knee fully with the hip at right angles to the body, or to flex the hip to a right angle while the knee is extended, occurs in many conditions besides meningitis. Among such conditions are cerebellar diseases and diseases of the upper neurons of the motor tracts, acute eye troubles, disuse of the lower limbs for some days, as in recumbency, local conditions in these limbs as sciatica, arthritis and contractures, old age, etc. 6. When Kernig's sign is well developed in a recently healthy individual who has fever and none of the conditions mentioned, then it is a valuable sign of meningitis, and this is probably, at least partially, in the cerebellar region. 7. For the purposes of greater clinical accuracy, it is urged that writers on this condition express the angle at the knee or hip in degrees, rather than merely mentioning the presence or absence of the sign."

5. **Gastric Fluid.**—Platt criticises the methods used in examining for acid factors in gastric fluid, which he says have suffered as much as other clinical tests from careless writing. He thinks that the ordinary clinical analysis of the gastric fluid may well be limited to the following acid tests: 1. Qualitative, for free acids in general, with congo-red paper; for free hydrochloric acid with Gunzberg's or Boas' reagent; for lactic and other organic acids by the modified Uffelmann's test, using the ethereal extract of the filtered gastric fluid. 2. Quantitative, for the total acidity with phenolphthalein, and for free hydrochloric acid using either the titration method with tropeolin or the more exact though more tedious method by successive Gunzberg's reactions. The organic acids may be estimated in the same solution by continuing the titration with congo-red paper as the indicator. When all the separate acid factors are to be determined, he offers the following plan: In the first place, the results of the qualitative examination should be borne in mind, and the analysis be made to meet the requirements of the actual state. He says it would be well, too, "to include with the other qualitative tests one for the acid salts, the acid phosphates, and this may be conveniently done by Knapp's method. His reagent is the red ferric thiocyanate, obtained by adding to 5 c.c. of water 2 drops of a 10 per cent. solution of ferric chlorid and 5 drops of a 5 per cent. solution of ammonium thiocyanate. To test for the acid phosphates, 1 c.c. of the reagent is placed in each of two test-tubes, and to one of the filtered gastric fluid is added, while to the other is added an equal amount of water. In the presence of acid phosphates the ferric thiocyanate is either entirely or partially decolorized. Presuming, then, that the qualitative examination has shown all of the acid factors to be present, the plan of analysis would be as follows, two samples being used: To a measured specimen of the filtered gastric fluid decinormal alkali is added until a drop of the fluid gives no reaction with Gunzberg's reagent, or, less exactly but more conveniently, a few drops of a saturated alcoholic solution of tropeolin OO may be added to the fluid and then the standard alkali until the magenta or purple-red of the solution turns to a true red (or, in the absence of organic acids, to a yellow). In either case the number of c.c. of alkali used serves for the calculation of the free hydrochloric acid. The addition of the decinormal

solution is now continued until the fluid under titration fails to give a reaction with Congo-red paper (the solution should now have a yellow color) and from the number of c.c. used the organic acids are estimated. A few drops of a 1 per cent. aqueous solution of alizarin are now added and the titration continued until the yellow-brown of the solution turns to violet; from the amount of alkali required to effect the change the acid salts are estimated. Finally, the total acidity is determined in the second sample, using phenolphthalein as the indicator, and from this the free hydrochloric acid, the organic acids, and the acid salts are deducted to obtain, approximately, the amount of hydrochloric acid in proteid combination. As an alternative method we may determine the free hydrochloric acid and the organic acids as above indicated, and then, adding phenolphthalein, continue the titration until the color change is effected. The amount of alkali added after neutralization of the organic acids gives together the acid salts and proteid-combined acid. The total alkali used indicates the total acidity. A second sample may now be titrated with alizarin as the indicator, this giving all of the acid factors with the single exception of the acid in proteid combination. The later may then be obtained by subtracting the results of the alizarin titration from the total acidity."

8. **Congenital Dislocation of the Hip.**—Whitman discusses the methods of treatment of congenital hip dislocation, holding that in certain cases one or more of the cutting operations must supplement the bloodless method, arthrotomy, osteotomy and excavation of the acetabulum, the latter of which is being more and more restricted in its application. He is inclined to the following opinion from experience: That the more complete fixation that may be obtained by carrying the plaster bandage below the knee after reduction, combined in certain instances with lessened outward rotation of the limb, is an improvement on the ordinary technic of the Lorenz operation in the treatment of young children; 2, that a longer period of fixation in an attitude approximating the normal is necessary to assure the remolding of the acetabulum in old subjects; 3, that arthrotomy and osteotomy must be regarded as necessary supplements to conservative treatment; 4, that the original Hoffa-Lorenz operation offers a prospect of a better ultimate result than transposition, and that it must, therefore, be held in reserve as a final resort after failure of the less radical treatment.

9. **Smallpox.**—The causes and treatment of smallpox are discussed by Magill, who holds that it is due to an organism, but he does not, as the title of his paper would seem, to indicate, demonstrate the species. He holds that vaccination rarely confers an immunity of more than eight years' duration, and often not longer than three to five years. He believes in an abortive form of smallpox where the eruption may be absent, though the patient has the intense backache, chills, headache, etc., the symptoms subsiding in three or four days. Examination of the blood of individuals thus affected shows the mononucleosis, specially characteristic of smallpox, and invariably fixes the diagnosis. He also remarks that the specific germ may be carried by a person for some time without its entering the system, which is important when the period of incubation is considered. He says contact is the only means of contagion; that air-borne smallpox is a myth.

11. **Gonorrhea.**—The three cardinal symptoms of gonorrhea, given by Wolbarst, are a profuse discharge, an angry-looking meatus, and a cloudy urine. These, with the finding of gonococci, make the diagnosis complete. He believes in a rather frequent non-specific form of urethritis which may cause confusion in the diagnosis. Other conditions mentioned are syphilis involving the urethra or chancre in that situation. He also recommends the Jadassohn-Goldenberg tests as absolutely reliable and as avoiding the fallacies of the Thompson two-glass test. He thinks it is hardly safe to consider posterior urethritis as a constant complication. The symptoms may be very mild or very severe as the infection may cause inflammation of all the genital organs and bladder, gonorrheal rheumatism, etc., as is well known. He urges the importance of making a correct diagnosis of inflammatory urethral affec-

tions and thinks if physicians would pay more attention to this subject, there would be fewer advertising quacks.

14. Tuberculosis.—The results of the first year's work of the White Haven Sanatorium are given by Flick as proving: 1, that tuberculosis is curable under the most primitive conditions, provided the patient is kept out of doors and given plenty of the right kind of food. The comforts of life are of minor importance, and exposure to the weather and cold may be disregarded. 2. For successful sanatorium work patients should be carefully classified and kept apart according to the class to which they belong. Incipient cases and chronic cases, with a good resisting power and a tendency to recovery, should be kept by themselves, and advanced cases with fever and doubtful as to outcome should be also kept separate. Dying patients should be kept in an institution especially adapted for their comfort and amelioration of distressing symptoms. 3. That tuberculosis is seldom recognized in practice until it is well advanced and more than one important organ involved. A systematic examination of urine has revealed involvement of the kidneys in a surprisingly large percentage. 4. That incipient cases recover in a very short time and advanced cases require a very long time for complete recovery. Inquiry as to the cases after leaving the institution shows that the incipient cases had generally kept well, but the advanced ones had mostly lost ground, while some who have remained in the institution are apparently making good recovery. He gives a tabulated statement of all the cases treated, with their results.

18. Suppurative Tubal and Ovarian Disease.—The following points are emphasized by Williams in the conclusion of his article: "1. That gonorrhea is by far the most frequent cause of suppurative tubal and ovarian disease. 2. That vaginal puncture is dangerous and unsurgical. 3. That the mass should always be removed through an abdominal incision. 4. That plain sterile water should be used in all abdominal operations. 5. The use of mercury, permanganate or any antiseptic, except alcohol, is unnecessary in the preparation of the operator or assistants, as cleanliness is the great point and may be obtained by soap, water and brush, using many changes of water and taking many minutes to scrub. 6. That silk should be used in all tying within the abdominal cavity. 7. That an absolute differential diagnosis previous to operation is in the majority of cases impossible. 8. That the cases in which drainage is used usually do better than those not drained. 9. The absolute avoidance of morphin, or any form of opium, before or after operation. 10. That the objections to operations are not founded on fact and that there is not enough consensus of opinion that these suppurative conditions should always be operated upon."

19. Movable Kidney.—With the symptom of abdominal pain the question of kidney displacement should always be considered. Reed remarks that many cases are not serious as regards results and the symptoms have a very wide range. He describes his method of determining the position of the kidney. The patient should lie on the opposite side to that about to be explored, with the shoulders thrown forward, the thighs flexed, and the flesh bared. The physician should take a position to the rear, placing the tips of the fingers of one hand in the triangular space behind and immediately below the twelfth rib, the fingers of the other hand directly opposite and immediately below the margin of the ribs. The patient should then be instructed to inspire deeply, hold the breath a minute and then let it go quickly. The finger tips of both hands should be thrust in firmly below the ribs rear and front and on expiration be quickly approximated as nearly as possible. In this way if mobility is but normal the kidney can easily be palpated. He thinks the operation should be repeated if not successful the first time. If the kidney has an unnatural mobility, success in palpating it is more certain, for it descends lower with inspiration. This method has been most satisfactory to him. He also describes his operation of nephropexy, not claiming that it is perfectly new. The method he advises embraces the muscle-splitting idea of McBurney to secure primary union rather than healing by granulation. He makes a straight incision, with the patient in the prone position and a large

round cushion under the abdomen, between the twelfth rib and the crest of the ilium along the outer margin of the erector spinæ muscle, splitting rather than cutting the muscle as much as possible. When the kidney is brought into position it is divested of its fatty capsule, much of which is removed. The fibrous capsule is split the full length of the kidney and carefully reflected from the sides to the extent of an inch. Each flap should then be stitched by four or five chromicized catgut sutures to the divided muscle. The suture is not inserted in the edges, but given a deep hold in both muscle and capsule. When the suturing of the fibrous capsule to the muscle is completed, interrupted sutures should be placed through the edge of the muscle and tied, which brings the muscular tissue in apposition to the exposed cortex of the kidney, insuring firm adhesion. The skin may be closed by interrupted silkworm-gut sutures. He suggests care in avoiding the iliohypogastric nerve and in not anchoring the kidney too high; the larger portion should be below the twelfth rib. It should also be kept in its normal relation to the axis of the body to avoid any twist of the ureter. The patient should be kept in bed three or four weeks and in many cases tonic and constitutional treatment begun and continued indefinitely. He suggests that before promising too much from operations for movable kidney, it is well to make sure that there is no general enteroptosis as a cause of the symptoms.

20. Empyema.—Withington analyzes 135 cases with special attention to the bacteriologic findings, the rate of mortality, result of treatment, etc. He thinks in the majority of cases it is the result of pneumonia. The character of the pneumonia is not to be judged by the organism found in the empyema. The great difficulty in securing the healing of operated cases is in bringing the opposite pleural surfaces into permanent contact. This is one reason for the free resection of ribs, and for the relatively favorable prognosis in childhood on account of the greater liability of a soft and flexible chest wall to contract on the lung. The gradual development of pus can usually be predicted with strepto- or pneumococci in the first fluid, but it can occur even with sterile findings. He insists on the importance of differentiating empyema from subphrenic abscess on account of the danger and location of the internal organs. He also advises delay of the thoracotomy till the pneumonia has resolved, keeping down undue compression by occasional aspiration of the pus.

21. Round Shoulders.—Lovett describes four types of spinal curvature: the first is a general curve (an exaggeration of the normal lines); 2, a backward projection greatest in the mid-dorsal region, the seventh cervical and mastoid points forming a straight line above it; 3, the lower part of the back straight and head runs forward from the seventh cervical; and lastly, 4, the spinal points form a nearly or quite straight line. He concludes that the study of faulty position has been incomplete. The spine has alone been considered rather than the relation of the feet, legs and pelvis to the spine, and the relation of the whole body to the perpendicular. The method he here describes is the side elevation of the whole attitude; the relation of the legs, thighs, pelvis and head to each other and to the perpendicular. He says that the seat of faulty attitude is not as yet formulated, and gymnastic treatment should be general and local. His method consists in placing the patient by an upright rod to which a sliding arm has been attached. At right angles to this is another horizontal arm eighteen inches long, placed at six inches from the back surface of the upright rod. The back surface of the upright rod is taken as the perpendicular plane from which distances are to be noted, and the measurements are made from the sliding horizontal arm, which is always six inches distant from the back surface of the upright rod. Any point, therefore, more than six inches from the sliding horizontal arm is in the front of the perpendicular plane agreed on, and any point less than six inches is behind it. The middle of the external malleolus was taken as the lower end of the perpendicular plane, with feet forming an angle of 45 degrees, the patient standing without shoes and in the natural position. He gives numerous photographs and tracings thus obtained.

25. **Epilepsy.**—Thomson deprecates the importance attributed to the convulsive element in epilepsy and points out that it is not characterized by special symptoms. Loss of consciousness is not always present, and he gives cases where it was retained throughout the attack of the graver epilepsies, or where there were alternative attacks of aphasia with perfect retention of consciousness. His definition of epilepsy is that it is a disease characterized by sudden derangement of the normal regulative inhibition existing between the cortical nerve centers, induced in the first place by abnormal afferent excitation, thus shifting the primary seat from the motor to the sensory or afferent portions of the nervous system.

26.—See abstract in *THE JOURNAL* of November 8, p. 1205.

27.—*Ibid.*, October 25, p. 1064.

29.—*Ibid.*, p. 1067.

31. **Pyuria.**—From his experience Guiteras lays down the following principles as to the preliminaries of exploratory incision or operation for pyuria: 1. All the methods at our command should be employed for determining the seat and nature of the lesion, examination of the urine, including cryoscopy and the phloridzin test, cystoscopy, ureteral catheterization, segregation of the urine from each kidney by appliances in the bladder and radioscopy. 2. The examination of the urine should be considered of the utmost importance and never entrusted to any except a competent man. 3. It is possible by careful study of the pus, blood, etc., and especially of the epithelial elements to determine the nature and seat of the lesion in the urinary tract. 4. A renal suppurative lesion being found it must be located in one or the other kidney, which can be done by cystoscopy, urethral catheterization combined with the phloridzin test, followed by an examination of urine from each kidney, the Roentgen rays, and, if need be, exploratory incision. Omission of one or more links in the chain of methods of examination here enumerated may give rise to grave errors in the diagnosis, and nephrectomy is never justified when we are not positive that the opposite kidney is present and in good condition on the basis of the tests mentioned.

32. **Dysentery.**—The treatment of dysentery in Peru is described by Hunter, who usually begins with ipecacuanha, 45 grains, preceded by 15 to 20 drops of tincture of opium and a sinapism to the pit of the stomach. He has also used alkaline solutions to wash out the mouth after vomiting, which is frequently very acid. After the ipecac there is little to be done except to keep the patient at rest and warm in bed and attend to the diet. If there is too much diarrhea treat it, but if the bowels become confined and require an enema, that should be attended to. If the ipecac fails, or is refused, he has employed the salines in some cases, sulphates of magnesium and soda. In some he has used resin of podophyllum, gr. 1/8, with 1/6 of a grain of powdered ipecac until bilious stools are produced. When other remedies fail in acute dysentery he uses turpentine with opium in emulsion, and if the movements continue greenish and slimy he uses lactic acid in dose of 15 minims largely diluted. The above are the principal remedies that he has employed. For drink he would first give the patient boiled water. For the first two or three days there will probably be very little appetite, then he allows chicken soup and arrowroot; afterward stronger diet can be given.

35.—See abstract in *THE JOURNAL* of October 25, p. 1066.

42.—See abstract in *THE JOURNAL* of October 25, p. 1064.

44.—This article has appeared elsewhere. See *THE JOURNAL* of November 15, title 86, p. 1279.

51. **Raynaud's Disease.**—Cushing reports a case of Raynaud's disease relieved by the application of the tourniquet to interrupt vasomotor innervation. The results were good. The treatment he uses is not applicable to cases where the vascular spasm affects territories other than the limbs, but it is deserving of further trial. Its principle seems to depend on the physiologic blocking effect of the elastic constriction on the peripheral vasomotor nerves. The temporary interruption of function allows the terminal arterioles to completely relax, and a state of arterial hyperemia to take the place of the local asphyxia which has resulted from the pre-existing spasm.

59.—See abstract in *THE JOURNAL*, xxxvii, p. 1392.

60. **Toxins in Inflammations of the Eye.**—The Boylston prize essay by Randolph gives the results of experimental studies on the effects of toxins injected into the eyes of rabbits, and closes with the following conclusions: "1. Bacterial toxins, so far as tested, when instilled even for many hours into the healthy conjunctival sac were found incapable of producing inflammation or causing other injury. 2. The same toxins when injected into the tissue of the conjunctiva or into the anterior chamber invariably set up local inflammation, the extent and intensity of the inflammation varying to some degree according to the species of bacterium yielding the toxin. 3. Bacteria which had not previously been proven to produce soluble toxins were found to produce them even in young cultures, and it is suggested that injections of bacterial filtrates into the eye, particularly into the conjunctival tissue, constitute a more delicate biological test for the detection of certain toxins than the tests usually employed for this purpose. 4. The experiments recorded in this paper furnish additional examples, in a comparatively new field, of the importance of toxins in explaining the pathogenic action of bacteria, and likewise emphasize the etiological significance of injuries of the covering membrane of the eye in favoring the action of toxins and of bacteria."

61. **Osteitis Deformans.**—The cases reported by Prince are discussed at some length and quite fully illustrated. He finds, summarizing his results, that: "1. We have no sure ground for differentiating hyperostosis cranii from osteitis deformans. 2. Hyperostosis cranii and osteitis deformans are probably trophic disorders. 3. Various clinical and pathological facts seem to indicate that they are at least allied disorders, and perhaps only different manifestations of one and the same disease. 4. The osteo-arthritis changes so commonly found in osteitis deformans are probably manifestations of the disease, and not complications. 5. The results of autopsies thus far made do not at all exclude the nervous system as the seat of trophic derangement, but the changes that have been found in the spinal cord and peripheral nerves and analogy with other known lesions like those of tabes and syringomyelia, suggest a neuropathic origin similar to that of the myopathies. 6. In future cases the nervous system should be exhaustively studied."

62. **Osteitis Deformans.**—From an examination of cases, skiagrams and specimens, Fitz concludes that hyperostosis is a condition which may affect few or many bones, early or late in life, and with inconstant symptoms; that the evidence in favor of the recognition of an independent disease—diffuse cranial hyperostosis—is insufficient, since the symptoms assigned to this affection are inconstant, and may occur in osteitis deformans.

63. **Suppurative Otitis Media.**—We may lay down the general rule, Dench says, that in any case of primary infection of the ear, if seen early in the acute stage, serious intratympanic caries can be prevented, the only exception being where there is early involvement of the mastoid cells and where there is tubercular infection of the intratympanic structure. Caries or necrosis is the essential or underlying cause of the symptom of chronic otorrhea, and it should be dealt with by the surgeon exactly as he would deal with the same condition elsewhere in the body. Two methods are available: 1. To remove all carious bone through the external auditory meatus. Knowing that in the early stages it is usually confined to the ossicular chain and those parts immediately adjacent to the malleus and incus, it seems reasonable that removal of these bones and curettement of the middle-ear would be an efficient procedure, and there is abundant proof of this fact. It is perfectly possible to remove not only the ossicles, but also any carious bone situated low down in the tympanic vault. Injury to adjacent structures, such as the facial nerve, the jugular bulb, the semicircular canals, the cochlea, and the cranial contents, seldom occurs during the course of this simple operation. In many cases, however, we have to deal with a caries of the middle-ear so extensive that it is impossible to remove all dis-

125. **Empyema of the Sphenoidal Sinus.**—Hinkel has had experience with 20 cases of disease of the sphenoidal sinus, in almost all of which the diagnosis was verified by operation. In only one instance was he sure that the sinus alone was involved, though in 7 others the other cavities were practically intact. The symptoms of the condition are obscure; he tabulates the principal ones he observed. Headache was observed in 9 cases; in 6 it was the most prominent symptom, and in 5 was unilateral. It was usually temporo-parietal; in one case chiefly about the root of the nose; in others pain was complained of behind the eye. In none of the cases was there any abnormality of the visual field or disease of the eye ground, but asthenopia was prominent in 2. Pain in the ears was observed in one case; there had been an otitis which had ceased. Asthma was present in 6 cases, cough in 8, pharyngeal catarrh in 2; in one it was the only symptom. Polypus was associated with disease of the sphenoidal sinus in 7 cases, and in 2 cases there were malignant growths. He describes his method of operation, preferring the intra-nasal route, which is usually not difficult. The possibility of penetrating the cranial cavity is to be considered, but deaths from this cause are few as compared with those due to meningitis from untreated sphenoidal abscess. Immediate or secondary hemorrhage may be serious, but is rare and generally controllable. His results with the operation have generally been satisfactory; the distressing symptoms have been relieved.

126. **Scarlatinal Perforation of the Faucial Pillars.**—Hubbard calls attention to this result following streptococcal angina, which has not been very extensively noticed. He remarks that it rather restores confidence in mankind to find so many causes for throat ulcerations other than syphilis. Special text-books and syphilographers do not give proper credit to scarlatinal angina as a cause of defects and cicatrices in the faucial pillars, but a deep focus of streptococcal infection is a very possible one. Perforation and scarlatinal ulceration is usually bilateral; being often very insidious and marked by other severe systemic symptoms, the lesion is very frequently overlooked. The treatment must be conducted with extreme surgical thoroughness and patient persistence.

129.—This article has appeared elsewhere. See THE JOURNAL of November 15, §33, p. 1283.

133.—Ibid., title 43, p. 1278.

138. **Gall Bladder Disease.**—Allen insists on the importance of early operation in possible gall bladder disease, exclusive of diseased conditions of the stomach, pancreas, etc., and where the diagnosis is positive and medical treatment has been strongly advised. In other cases where the diagnosis is uncertain, whether it be a question of malignancy, stone or inflammation, it is wise, in his opinion, to advise early exploration. If malignancy is encountered little damage has been done. Exploration will often result in the discovery of conditions which can only be helped by further surgery, and the earlier it is undertaken the greater the safety to the patient and the fewer the complications.

139.—This article has appeared elsewhere. See THE JOURNAL of November 15, title 82, p. 1279.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal (London), November 1.

- 1 *A Discussion on the Causes, Diagnosis, and Principles of Treatment of Dilatation of the Stomach. T. Clifford Allbutt and others.
- 2 *On the Dietetic Treatment of Granular Kidney. Carl von Noorden.
- 3 A Successful Case of Gastroplication for Dilated Stomach. William M. Banks.
- 4 *A Discussion on the Differential Diagnosis of Functional and Organic Paralysis. Thomas Buzzard.
- 5 *Infantillism and Senilism. Hastings Gifford.
- 6 The Cause of Heart Irregularity in Influenza. James MacKenzie.
- 7 The Clinical Estimation of Urinary Purins by Means of the Purinometer. I. W. Hall.
- 8 Observations upon Certain Forms of Arthritis. F. J. Poynton and Alexander Payne.

- 9 Some Practical Remarks on the Diagnosis of Heart Disease. David Drummond.
- 10 The Earliest Known Physician. F. M. Sandwith.
- 11 Overlooked Forms of Graves' Disease. Harry Campbell.
- 12 Some Observations on, and the Results of the Treatment of, 100 Cases of Pulmonary Tuberculosis Treated by the Open-Air Method. D. J. Chowry-Muthu.
- 13 The Dietetic Treatment of Pulmonary Tuberculosis. Noel D. Bardswell and J. E. Chapman.
- 14 Ivory Exostosis of Orbits Operated upon and Observed During Eighteen Years. Karl Grossmann.
- 15 Four Cases of Monocular Neuritis. Charles G. Lee.
- 16 On a Method of Suturing the Tendons to Form a Better Stump After Enucleation of the Eyeball. Simeon Snell.
- 17 A Method of Excision of the Eyeball to Secure Greater Mobility of the Stump. Ernest Clarke.
- 18 A Discussion on the Treatment of Sclero-keratitis. Arthur Sandford.
- 19 The "Sliderphone," a New Instrument for Discovering Iron Splinters in the Eyeball. J. E. Widmark.
- 20 Civilization and Eyesight. Charles Wray.
- 21 *Contribution to the Etiology of Myopia. J. E. Widmark.
- 22 Double Case of Congenitally Displaced Transparent Lens Treated by Discission. David McKeown.
- 23 Notes on Forty Cases of Extraction of the Lens in Cases of High Myopia. Adolph Bronner.
- 24 Vasomotor Disturbance of the Eye. Samuel Lodge.
- 25 Experimental Lesions of the Retina. J. Herbert Parsons.
- 26 A Discussion on the Rarer Forms of Optic Atrophy. James Taylor.

The Lancet (London), November 1.

- 27 The Pathology of Infection. J. Burdon-Sanderson.
 - 28 *The Nature, Causes, and Treatment of Cardiac Pain. Alexander Morison.
 - 29 A Case of Aneurism Involving the Innominate, the Right Subclavian, and the Right Common Carotid Arteries. Charles A. Ballance.
 - 30 *Abstract of Certain Experiments on Tuberculosis. George Dean and Charles Todd.
 - 31 Ozone in Chronic Middle-Ear Deafness. George Stoker.
 - 32 The Epidemic of Cerebrospinal Meningitis at Lisbon. H. W. Seager.
 - 33 Some Clinical Aspects of Revaccination. Arthur Maude.
- Archives Gen. de Medecine (Paris), August.
- 34 *La chlorurie alimentaire expérimentale dans les néphrites. H. Claude and A. Mauté.
 - 35 *Etude cytologique des pleurésies tuberculeuses. F. Barjon and A. Cade.
 - 36 Etude des troubles du langage par lésion de ses centres d'arrêt. (Logorrhées de Pick). R. Touche.
 - 37 *Des accidents qui résultent de l'enfouissement sous la neige (being buried under snow). Ferrier.
 - 38 Poisons, Toxins and Venoms. J. Noé.—Les venins. (Seventh article.)

September.

- 39 *Sur un Signe de diagnostic précoce des attaques et des rechutes de rhumatisme articulaire aigu. P. Achalmé.
- 40 Le cancer primitif du canal hépatique. L. Ingeltrans.
- 41 Marche de la température dans les formes intermittentes de la malaria dans les pays chauds. J. Brault.
- 42 Technique pour la récolte (collecting) de l'urine chez les animaux de laboratoire. E. Boix and J. Noé.
- 43 La technique de la mesure de la pression sanguine. N. Vaschide and J. M. Lahy.

Bulletin de l'Académie de Med. (Paris), October 21.

- 44 Cellulite gommeuse pelvienne simulant une tumeur maligne du petit bassin; survenue à l'âge de 34 sur un sujet hérédosyphilitique; et guérie par le traitement mixte. A. Fourrier.
- 45 *Sur l'éruption volcanique de la Montagne-Pelée à la Martinique, Aout 30-31, 1902. Kermorgant.

Presse Medicale (Paris), October 18 to 25.

- 46 (No. 84.) Les variations de l'alcalinité du sang (blood). M. Labbé.
- 47 (No. 85.) *De la Cardiorrhaphie. F. Terrier and E. Raymond.
- 48 (No. 86.) *Insuffisance des organes thyro-parathyroïdiens et eclampsie. A. Fruhinscholz and F. Jeandelize.

Archiv f. Verdauungskrankheiten (Berlin), viii, 4-5.

- 49 *Hydrochloric Acid Production and Motor Function of Normal Stomach. H. Kornemann.—Ueber Salzsäureproduktion und motorische Thätigkeit des normalen menschlichen Magens.
- 50 Fate of Carbohydrates in Infants' Intestines. I. Hedenius.—Ueber das Schicksal der Kohlehydrate.
- 51 *Experimenteller Beitrag zur Kenntniss der Ulcus ventriculi. R. Dalla Vedova.
- 52 Ueber die Resorption von Jodalkalien, Natriumsalicylat, Chloralhydrat und Strychnin im Magen. V. Otto.
- 53 *Gastric Digestion of Albumin. R. Schorlemmer.—Untersuchungen über die Grösse der Eiweissverdauenden Kraft des Mageninhaltes Gesunder wie Magen- und Darmkranker unter kritisch vergleichender Benutzung der Hammerschlag- und Mett'schen Methode. (Commenced in No. 3.)

Deutsche Med. Wochenschrift (Leipsic), October 23.

- 54 *Ueber die Palpation des Pylorus. W. P. Obrastzow (Kiev).
- 55 *Verlauf und Ursache (course and cause) einer Hospital-Diphtherie-Epidemie. F. Cuno.
- 56 *Significance of Meconium Plug. H. Well.—Ueber die Bedeutung des Mekoniumpropfes beim Neugeborenen.
- 57 *Seifenspiritus (tincture of soap) als Desinfiziens medizinischer Instrumente. K. Gerson.
- 58 *Caution in Regard to Suprarenal Extracts. O. von Fürth.—Mahnung zur Vorsicht beim Gebrauche von Nebennierenpräparaten.

- 59 *Serum Treatment of Scarlet Fever. A. Baglinsky.—Ueber die Behandlung des Scharlach mit Antistreptococcenserum. Mitteilungen a. d. Grenzgebieten (Jena), x, 3-4.
- 60 *Wann und wie müssen die chronischen Nephritiden (Tubercu-
61 * of the Blood in Respect to Prog-
3, etc. Canon.—Eine weitere Reihe
von bact. Blutbefunden und Bemerkungen über den prak-
tischen Werth solcher Befund bei "Blutvergiftung und Am-
putation." Carcinomform. G. Riehl.
- 62 63 64 65 66 67 68 69 70 71 72 *Nature of Circulatory Disturbances in Acute Infectious Dis-
eases. Pißsler and Rolly.—Experimentelle Untersuchungen
über die Natur der Kreislaufstörung bei akuten Infektions-
krankheiten.
- 69 Zwei weitere Fälle von Uterusruptur, operativ geheilt. G.
Wiener.
- 70 Weitere Bemerkungen über Atropin. H. Gebele. Ibid. Aron-
heim.
- 71 Eine Endemie von Paratyphus. F. M. G. de Feyfer. (Com-
menced in No. 41.)
- 72 *Causes, Symptoms and Treatment of Insufficiency of the Non-
Pregnant Uterus. A. Theilhaber.—Ursachen, etc., der In-
suffizienz des nicht schwangeren Uterus.
- Cronica Medica (Lima, Peru), xix, May to September.
- 73 (No. 321.) *Intrasplenic Injections in Malaria. J. L. C.
Gutiérrez.—Algo sobre paludismo.
- 74 (No. 322.) Analgesia raquicoanalca. N. F. Concha.
- 75 *La refrigeracion en la pneumonia. E. Escomei.
- 76 (No. 323.) El Paludismo. R. D. Barea. (Commenced in
No. 318.)
- 77 (No. 327.) Massage in Therapeutics. C. Sanchez.—La maso-
therapia. Su historia y sus indicaciones. (Commenced in
No. 318.)
- 78 (No. 328.) Pathologic and Anatomic Study of Fatal Primary
Spleenopathy. J. L. C. Gutiérrez.—Una historia clinica.
- Gazeta Medica da Bahia (Brazil), xxxiii.
- 79 (Nos. 8-9.) Notas sobre o diagnostico bacteriologico da peste
bubonico. G. Moniz.
- 80 (No. 11.) Pathologia Intertropical. A. R. Vianna. Address.
- 81 Pregnancy in Extreme Case of Kyphoscoliosis. F. P. Froes.—
Cypho-escoliose e gravidez.
- 82 (XXXIV, No. 1.) Existe na Bahia a febre de Malta? G.
Moniz.

treatment, systematic rinsing of the stomach and the admin-
istration of water by the rectum. These rules are applicable
until surgical interference is indicated. Atonic dilatation,
however, is the principal thing and is frequently a complica-
tion of ill health from other causes which the stomach ag-
gravates and thus keeps up a vicious circle. He finds liberal
doses of bismuth, with sodium bromid and a little tincture of
rhubarb in a mucilaginous and cordial water very helpful, and
if there is any suspected hyperchlorhydria, the use of calcined
magnesia. If the muscle fiber is suspected to be enfeebled,
strychnin seems to be indicated, but local effects are not im-
mediate. In his experience he has come to expect little from
electricity or from massage unless it is in very skilled hands;
it should not be employed before the third stage of digestion.
Hydrotherapy expertly carried out and not after a routine
fashion is very useful, especially when sleeplessness is trouble-
some. Gentle saline laxatives are useful; the copious use of
water is bad. In case of vertigo he thinks the avoidance of
liquids at meals is undoubtedly a very excellent remedy. Rest
after meals is a good thing and in distended stomach he finds
papain a useful aid in digestion and a little hydrochloric acid
in water unless there is reason to believe that acid is formed in
excess. Meals must be cut down to physiologic standards,
eaten slowly and thoroughly masticated. The teeth should be
carefully examined. It is an important thing to relieve a per-
son from the press of occupation and business. Anemia and
other causes he treats in the usual way.

2. Dietetic Treatment of Granular Kidney.—The ques-
tion of diet in chronic nephritis is discussed by Von Noorden,
who first remarks in regard to an examination of the secretory
and excretory actions. He questions as to how much albumin-
ous substances can be allowed. As regards this point he thinks
that for men about 92 to 112 grams of albuminoids and 80 to
100 grams for women is about the proper amount, if the general
condition is a good one, but in acute exacerbations the quantity
will have to be reduced. This, of course, must not be done
without special reason, because it would weaken the patient.
As regards quality he recognizes no special differences; it is no
special matter which kind of albumin is eliminated, the patient
can be allowed considerable variety and freedom in diet.
The question how much fluid a patient with granular kidney
can be allowed has recently come to his attention. Formerly
it was taught that the patient passed a larger quantity of
urine and accordingly must drink a great deal, but he says we
must not forget that by inundating the vascular system we
increase the work of the heart and heart disease is a constant
accompaniment in chronic nephritis, and may be the more
dangerous of the two. A reasonable reduction of the daily
quantity of fluid, he thinks, has a life-saving effect. He would
not wait until the strength of the heart has given way, but
would tell every person with granular kidney not to drink
more than one and a half liters a day, to guard against cardiac
weakness. It is also important to warn against overeating.
He calls attention to the danger of corpulence in these cases.

4. Functional and Organic Paralysis.—The term func-
tional is here limited by Buzzard to cases of paralysis, which
it would be possible to simulate voluntarily. There are some
symptoms, the presence of which are conclusive as to the exist-
ence of organic disease, such as optic neuritis or atrophy, fixed
pupil, hemianopsia, absence of knee-jerk, electrical reaction
changes, localized atrophies, characteristic bed sores, bladder
paralysis with ammoniacal urine, paralysis exactly limited to
a single nerve region and the toe phenomenon of Babinski.
There are no symptoms which can be relied on, however, un-
supported, to establish the diagnosis of functional paralysis.
He limits his observations to the following forms: hemiplegia,
monoplegia, paraplegia and insular sclerosis. It is very rare
for any kind of functional hemiplegia to have been imme-
diately preceded by apoplexy and the anesthetics are decidedly
different and apt to be only partial. Hemianopsia is not ob-
served in hysterical hemiplegia, but amblyopia with contrac-
tion of the visual field is. The sight affections alone may be
an important guide from this and other symptoms. The
differences in gait are classic in the two forms, and the com-

1. Dilatation of the Stomach.—In opening the discussion
on stomach dilatation, Allbutt says the means of defining the
position and volume of the organ are defective, owing to the
anatomic arrangements. He thinks the dependence of dilata-
tion of the stomach on movable kidney has been overrated. Re-
laxation and extension are apt to occur in acute gastritis and
chronic gastritis, most commonly of all in primary muscle
failure, which may be due to the toxic action or to some atony.
Spasm of the pylorus is claimed to be sometimes strong enough
to cause dilatation of the stomach, and there is surgical evi-
dence for this fact. He thinks also that under certain nervous
perturbations a sort of gastric paresis may occur. He asks
how are we to detect the lesser degrees of dilatation and dis-
tinguish them from mechanical conditions and gastroptosis.
The symptoms may be indefinite. Lassitude, heaviness after
meals, pain at the ninth thoracic vertebra, vertigo, sleepless-
ness, depression, flatulence, cardiac irregularities, scanty urine,
etc. The local signs are noted. Slack stomach is common in
heart diseases and may be simulated by distended colon, and
he remarks in regard to splashing sound, squelches, etc., as
symptoms. The test of the contents of the stomach by siphon-
age is important, but he finds difficulty in practicing this on
British subjects, who do not like this method. Sir William
Jenner called attention to the valuable evidence of seeds or
grit if the time of their swallowing and their passage from the
bowel can be accurately dated. The quantity of water is no
special guide as there are variations of tolerance and the pos-
sibilities of retained gases are very great. It is of more
service to note the force of its return. Gastric illumination
teaches us little, but we learn something from radiography,
and with this the chemical tests, the use of iodid and salol may
be of value. In obstructive dilatation the general rules are of
concentration of diet, with parsimony in carbohydrates as a

bined flexion of the thighs and trunk noticed by Babinski is quite an important distinction. The flaccidity of the limbs instead of contracture is also evidence. The behavior of the reflexes is important, though not an absolute guide. Reappearance of voluntary motion at times is important, but he lays special stress on the Babinski toe phenomenon. The only form of organic monoplegia with which the functional form is at all likely to be confounded is that which depends on the lesser cortical centers or their pyramidal tracts and complete cortical monoplegia is a rare phenomenon as compared with hemiplegia. Functional monoplegia, on the other hand, is not at all rare. The paraplegic form of functional paralysis is probably the most common and the less difficult of diagnosis. Absence of knee-jerk is never a symptom of functional disorder. The electric reaction of the muscles, the condition of the plantar reflex and negative findings supported by the absence of bed sores or bladder involvement ought to help the diagnosis. It will be found that the district occupied by anesthesia does not correspond with that which would be occasioned by organic lesion. Insular sclerosis is noticed at some length, and he does not advocate the view of a hysterical condition eventuating in structural disease. The Babinski toe symptom is of special value in this condition. The difficulty in diagnosis is great in neurotic persons with insular sclerosis, with its occasional transitory paralysis.

5. **Infantilism.**—Gilford describes the various kinds of infantilism, normal infantilism, which simply means the delay of maturity and morbid infantilism associated with disease of the thyroid, pituitary body and sexual organs. He uses the term *ateleiosis* to indicate that form characterized by an abrupt onset, absence of perceptible cause, the presence of infantilism of a conspicuous kind, the retention of unimpaired intelligence and a special tendency to marked delay of the development of the sexual system. It may begin at any of the developmental periods of life and even in the fetal condition. In this case there may be an abnormal smallness of the brain and actual imbecility. It is most characteristic when it appears during infancy and childhood. The childlike form and physiognomy added to a look of intelligence and of independence, combined with the wrinkling and weathering of age, give an appearance which is not that of a child or of a cretin, and is still less like that of an ordinary adult. That beginning at a later period of life lacks some of these external features, but there is something strange, the size, proportion and facial characteristics of a boy or girl are combined with the carriage and manner of an older person. The condition of the skin showing age changes is especially notable. Such individuals undergo senile changes quite as early, if not earlier than those who are of normal development. There seems to be a form of the disease in which the skeleton appears to ossify at the time of puberty, and the sexual system go on to full development, but it is not common. Senilism is treated under much the same heads; there is premature development and rapid decay. He suggests the name *progeria*. This also has an abrupt onset and absence of appreciable cause and retained intelligence. Apparently only two cases have heretofore been reported, one of which is given here. In this the changes found on postmortem were atrophy of certain of the connective tissues, especially fat, with those of the bone which were laid down in membrane, as the skull, the periosteal bone of the shafts of the long bones and the lower jaw and clavicles, and certain epithelial structures like the skin, hair, nipples, etc., and also to a less degree, wasting and want of development of the muscles. On the other hand, there was a relative hypertrophy, or good development of cartilaginous structures, brain and nervous system. The liver was relatively large. In conclusion he refers to a case published by Drs. A. S. and J. B. Charcot of a cutaneous affection in which the skin changes were those of old age, thus differing from the ones he here describes.

21. **Myopia.**—On the basis of his observations Widmark offers the following thesis: "If by any cause the sight of the one eye is weakened in early childhood, myopia is developed exclusively or principally on the other (strong) eye, whether

the first-named takes part in fixation or passes on to convergent or divergent strabismus. If one of the eyes is lost a typical myopia may be developed in the remaining eye. Convergence equally with accommodation is, therefore, not one of the most important factors in the origin of myopia, for the myopia can arise independently of all convergence. The chief cause of myopia is "seeing" in a limited sense; the perception in the yellow spot and the processes connected therewith at the posterior pole of the eye. What these processes may be is not easily decided. But it seems to me not impossible that the effort of discerning the objects quickly following on each other—as, for instance, the letters in writing or reading—might lead to the hyperemia at the bottom of the eye, which some theories assume as a predisposing cause of the myopic changes at the posterior pole of the eye. Accumulated products of fatigue may also have a deleterious influence on the membranes. Hyperemia on its side may lead to softening of the tissues, which yield to the intraocular pressure. In more advanced cases the hyperemia and the products of fatigue may lead to more serious changes of an inflammatory or atrophic character." He does not deny all importance of convergence, but he is careful in his practice to facilitate the convergence by means of corrective glasses, especially in cases of muscle inefficiency.

28. **Cardiac Pain.**—In his first lecture Morison describes the anatomy and physiology of the heart and its innervation and circulation, and calls attention to the special pathologic changes which have to do with the production of angina pectoris. The atheromatous change in the coronaries is a very striking and important phenomenon in many of these cases, and he also notes a case of aneurism found in one of these vessels. He thinks that thrombosis as a cause is merely a hypothesis drawn from analogy with other parts of the body. He differs from Allbutt's opinion that all clinical cases of angina pectoris owe their origin to extracardiac causes, though admitting aortic disease may have its effect.

30. **Tuberculosis.**—Dean and Todd have experimented by passing tubercle bacilli of human origin through various animals, the pig, cat, rabbits and rats, injecting them in others and testing their virulence. In calves the effect seemed to be comparatively negative. Only local and gland lesions were found in some cases, in others none at all. The injection of pigs with matter obtained from human tuberculous subjects and the feeding of them with the same produced general fatal tuberculosis. The experiments seem to show that the human tubercle bacillus is not markedly exalted in its virulence for the calf by a single passage through the pig, cat or rabbit; still they show that it is not absolutely innocuous, as the control animal injected directly with sputum contracted an extensive glandular tuberculosis. This might seem to indicate that the passage through other animals produced a diminution of virulence, but it must be remembered that in the one case the associated organisms had been eliminated by passage, while in the other they played an important rôle by aiding the attack of tubercle bacilli. The experiments, however, indicate that pigs can be generally infected as result of inoculation with human tubercle bacilli.

34. **Test Alimentary Chloruria in Nephritis.**—Claude and Mauté have been making a special study of the test elimination of salt in the urine. The patients on a strict milk diet for at least four days, ingest 10 gm. of sodium chlorid dissolved in 125 gm. water, in three doses during the day. They refer to a case reported by Bujniewicz last year of traumatic injury of one kidney. All the urine from the fragment left was voided through a fistula, while that from the other kidney collected isolated in the bladder. The urine from the injured kidney showed an abnormally low proportion of sodium chlorid. The organ had to be resected later and the glomeruli were found sound while the convoluted and the straight tubules were profoundly altered. The sodium chlorid must have been absorbed by osmosis without any secretion on the part of the epithelial cells. Claude found that the response varied with the type of nephritis. In the parenchymatous form, when well or passably tolerated, the patients respond the same as normal subjects. When less perfectly tolerated the course of the

affection can be supervised and symptoms warded off by daily cryoscopic examination of the urine. In sclerous nephritis, on the other hand, the elimination of sodium chlorid differs completely from the normal type. After ingestion of the above amount it does not appear in the urine until the first or second day after the first dose, and the maximum may not occur until after complete cessation of the salt. The chloruria does not cease on suspension as in normal conditions, but continues for several days afterward. In advanced stages of nephritis ingestion of salt is not followed by any chloruria.

35. Cytodiagnosis of Tuberculous Pleurisy.—Barjon made cytologic examination of 43 cases of tuberculous pleurisy and is impressed with the great value of this method of differentiating the affection. The technic is simple, and although the findings in case of effusions in the joints and peritoneum and in the cerebrospinal fluid are not very reliable, yet in case of pleuritic effusions they seem to be constant. According to the experience accumulating on every hand cytodiagnosis is a rapid and an infallible means of differentiating tuberculous pleurisy. The proportion of lymphocytes ranges from 65 to 98 per cent., increasing as the affection continues. Defibrination reduces the number of polynuclear cells. Endothelial cells were found in two-fifths of the cases. The examination should be repeated several times on account of the variability of the formulæ in the earliest stages. The proportion of polynuclears is larger when there are pulmonary lesions.

37. Accidents Following Burial Under Snow.—Ferrier summarizes the reports of the surgeons connected with two companies of troops who were buried under avalanches in the Alps at separate times. The symptoms were those of acute asphyxia and loss of consciousness. The coldness of the snow evidently depressed the vital processes as in a hibernating animal. The respiratory passages also remained permeable and the snow always contains more or less air imprisoned in it. Owing to these facts the men who had been buried were restored on application of artificial respiration, rhythmic tractions of the tongue and peripheral stimulation to combat the asphyxia and syncope. To restore the central warmth the body was rubbed vigorously at first with snow, then with cold water, then gradually warming the water. These measures applied with perseverance and energy proved successful even in case of men who had been apparently dead for hours, and who presented unmistakable evidences of freezing of the tissues (the limbs partially stiff, the cellular tissue hard in the exposed regions). They were rubbed through their clothing out of doors. The warming must be done very gradually, and no hot fluids given to drink warmer than tepid, as blisters like those from a burn develop in the mouth if hot beverages are taken. The patient should not be allowed to sleep after he is resuscitated until all danger of syncope has passed. The asphyxia was just as acute after twelve minutes under six feet of snow as after two and one-half hours in the second accident, and the unconsciousness was as complete, but resuscitation was possible in both cases by these measures.

39. Early Sign of Rheumatism.—Achalmé points out that the early differentiation of acute articular rheumatism and institution of salicylic medication is of inestimable advantage to the patient. He has noticed in the clinic and confirmed the fact by experimental research that three or four days before the appearance of the phenomena in the joints the pathogenic agent of the infection invades the myocardium and the first symptoms of the infection are revealed at this point in arrhythmia. In a typical instance the pulse was only 56 and very irregular. The heart beat was vigorous, almost exaggerated, and the heart sounds corresponded to the disturbance, while its rhythm was much altered. The contractions were irregular, grouped in twos, threes or fours of uneven force and transmitted to the radial pulse with the same characteristics. There were no subjective symptoms on the part of the heart; but the patient sweated profusely and complained of a coated tongue, restless sleep and slight headache. Five days later the pains in the joints cleared up the diagnosis. This arrhythmia only lasted a few days, probably subsiding as the heart became accustomed to the infection. He has observed it

likewise in cases of relapse or recurrence of the infection and recommends it as a valuable sign of impending acute articular rheumatism.

45. Eruption of Mont Pelee.—Kermorgant reports that the lesions presented by the patients attended by the army surgeons after the August eruption of Mont Pelée, as well as the aspect of the cadavers, suggested the action of electricity. Several describe the view of the cloud that poured down from the mountain as sown with lightning and balls of fire, and Dr. Lidin reports that the air was strongly odorous of ozone. The clothing was intact and the burns seemed to be elective. A mother, for instance, was only slightly burned on the ear, while the babe in her arms was charred. Some of the deaths must have been due to asphyxiating gases as no traces of burns were found on many cadavers among those exhibiting burns. At the autopsies the internal organs were found much congested. The burns of the first and second degree, even the most extensive, all healed by the fifteenth to the twentieth day. All burns were cleansed from volcanic ash and dressed with a saturated solution of picric acid.

47. Heart Suture.—Two years ago Terrier was able to collect 11 cases in which the heart had been sutured, and mentioned at the time that the surgeons had operated by ten different methods. In this present communication, which was one of the addresses at the French Congress of Surgery in October, he has been able to find a total of 51 interventions on the heart. He states that he has tried on the cadaver all the various procedures that have been employed in suturing the heart, in addition to his clinical experience, and his conclusion is in favor of an outward opening flap. The incision occupies half of the second interspace, then is carried almost perpendicularly along the left margin of the sternum and extends downward and outward in the sixth interspace past its center. The costal cartilages are divided close to the sternum. The left hand is then inserted between the ribs and the pleura, inside a compress, and the pleura is detached with the fingers working through the compress. The latter is left as the hand is withdrawn to protect the pleura. It is unnecessary to cut the ribs as the flap is turned back; it is best to break each in turn to make the hinge. There need be no fear of injuring the detached pleura protected by the compress. Double ligature of the mammary artery is not always necessary, but is a wise precaution in all cases. The pleura is then turned back over the flap and compress, held by two forceps. It is unnecessary to detach the pleura from the triangular muscle. The pericardium is incised in a T to explore the auricles and the same T incision, reversed, is the most effective for exploring the rear aspect of the heart. The first and second fingers of the left hand can be introduced under the heart inside the pericardium, and bring it up into view. A wound in the rear can be explored by pivoting the heart on its long axis, holding it by the threads of the suture in the front. This method of procedure allows free access to all the heart except the right auricle. If this must be reached it may be necessary to resect a portion of the sternum. The pleura can be drained through the lower outer angle of the wound and the pericardium at the inner angle. Terrier does not claim that this method of procedure is applicable to all cases, but that it fits the majority and should be considered first. In case the intervention must be from the right side, he recommends a similar outward opening flap. Ten large cuts illustrate the various steps of the operation.

48. Thyroid Insufficiency and Eclampsia.—In this communication from the maternity at Nancy, the case is described of a woman with myxedema who passed through a pregnancy without symptoms, but during parturition eclampsia developed, without appreciable albuminuria. Lange and others have pointed out the sympathy between the thyroid gland and the genital functions evinced by the frequent hypertrophy of the thyroid in the fifth to sixth month of pregnancy and the subsidence of the hypertrophy under cautious thyroid treatment. Heile has also recently published a case of convulsions in a pregnant woman who had previously undergone partial thyroidectomy. From these and other clinical and experimental facts observed the conclusion is evident that certain cases of

eclampsia are due to functional insufficiency of the thyroid apparatus. Thyroid insufficiency induces chronic troubles, disturbances in nutrition, myxedema, while insufficiency of the parathyroid glands causes acute troubles, convulsions. The acute disturbances in cases of thyroidectomy are probably due to the ablation of the parathyroids. Although the thyroids and parathyroids are different organs, yet they are associated in their functions in all probability. When the thyroid gland does not become hypertrophied by the sixth month of pregnancy, the woman should be supervised in view of possible eclampsia. When the latter develops in a pregnant or parturient woman, especially if the thyroid gland is not hypertrophied, and if there is no albuminuria, it is possible that thyroid medication might prove beneficial. It has been tried by Lange in normal pregnancies without inconveniences, and Nicholson reports encouraging results from it in one case. In some of the experiments the thyroid insufficiency induced albuminuria in the animals. Consequently albuminuria is not inevitably a contraindication to thyroid medication.

49. Production of HCl.—Kornemann gives a series of tables and curves showing the absolute and proportional amounts of hydrochloric acid after a test breakfast, as determined at ten-minute intervals for three to six hours. Incidentally he was able to estimate the motor function at the same time. Half of the test meal had vanished from the stomach by the end of thirty minutes and only a quarter was left by the end of the hour. The absolute amount of hydrochloric acid reaches its maximum in twenty minutes after a test breakfast, remains at this point for twenty more, and then gradually declines. After a test dinner the maximum is reached in 120 minutes. He appeals to others to control these tests and thus establish a definite standard for normal conditions.

51. Pathogenesis of Gastric Ulcer.—Dalla Vedova's further experience has confirmed his previous conclusions and establishes that irritation of the celiac plexus or of the splanchnici in animals is liable to induce necrotic, hemorrhagic or ulcerative alterations in part of the stomach wall. They bear a close resemblance to the characteristic aspect and histology of gastric ulcer in man. (See also editorial in *THE JOURNAL* of Nov. 23, 1901, p. 1392.)

53. Power of Stomach to Digest Albumin.—Schorlemmer reports extensive research in this line undertaken at Boas' clinic. The results demonstrate the superiority of Mett's method for quantitative estimation of the pepsin. This ferment resists all injurious influences to the very last, and its determination is an important indication for treatment of gastric affections. The absence or gradual decrease of this ferment is a sign of severe destructive processes in the stomach. All the details of repeated examination of the stomach contents in 233 subjects are given in tabulated form. The list includes 40 with normal stomachs, 18 with gastric neuroses, 12 with carcinoma and 23 with hyperacidity. No parallelism could be discovered between the secretion of hydrochloric acid and pepsin in the majority of cases, but the production of pepsin seems to be exaggerated in cases of hyperacidity. There seems to be also a certain connection between them in gastritis anacida. The rennet ferment and pepsin do not parallel each other, as a general rule, but the rennet ferment and hydrochloric acid diminish together in cases of gastritis anacida. The digesting process is promoted by shaking.

54. Palpation of Pylorus.—Reviewed in *THE JOURNAL* of May 17, 1902, p. 1336.

55. Diphtheria Contagion from Healthy Persons.—Cuno describes an epidemic of diphtheria in a hospital for children at Frankfurt. Numerous cases occurred in various wards and the epidemic persisted, notwithstanding the most vigorous disinfection and isolation of the affected children. Neisser was consulted, and suggested that all persons in contact with the children, including the physicians, should submit to a bacteriologic examination. When this was done one of the nurses who suffered from a chronic throat affection, but was otherwise healthy, was found to harbor virulent diphtheria bacilli in her throat. Looking back over her service it was discovered that

the outbreak of the epidemic in each ward corresponded with her having been assigned for duty to the ward in question.

56. Forensic Importance of the Meconium Plug.—Weil does not agree with those who believe that the absence of the meconium plug has a medicolegal significance, but he does admit that the presence of the plug is suggestive that the child survived birth and succumbed later.

57. Disinfection of Instruments with Soap Tincture.—Gerson corroborates his former assertions as to the efficacy of disinfection of instruments with tincture of soap, citing extensive bacteriologic tests in evidence. He wraps the blades in Bruns' cotton impregnated with tincture of soap. The cotton protects them from the air and the tincture is an efficient disinfectant. The instruments are then ready for use at any moment. After using them he rubs them clean with cotton moistened with the same tincture, then wraps them in a fresh piece and lays them aside. No boiling nor steaming is required and the instruments are not harmed by the process. He recommends this method especially for military and other practice where steam disinfecting appliances are not available. He has found that instruments infected with pus, etc., and not even wiped off after having been used, proved perfectly sterile after a few days in the wet cotton wrapper. No colonies developed when they were rubbed on agar plates or soaked in bouillon.

58. Warning on Suprarenal Extracts.—Fürth is private docent of physiologic chemistry at Strassburg, and has already published communications warning against the intravenous use of suprarenal extract on account of its established toxicity by this route. He has recently observed a case of severe intoxication for several hours resulting from the injection into the urethra of a solution of suprarenal extract to arrest hemorrhage from an internal urethrotomy. The hemorrhage was checked at once, but attacks of syncope and twitching of the extremities recurred for several hours. He therefore warns against the use of the extract wherever there is any possibility that it might get into an open vein. Animals have succumbed with nervous, circulatory and respiratory symptoms after subcutaneous administration of suprarenal extract. Blum induced diabetes with it. Fürth urges caution in its use, as it is too valuable a remedy to be allowed to fall into discredit by carelessness in its administration and consequent accidents.

59. Scarlet Fever Serum.—In this auto-abstract of a communication to the Carlsbad Naturforscher Congress Baginsky states that he has examined the pharyngeal secretions of scarlet fever patients, and the organs of scarlet fever cadavers or the cerebrospinal fluid—a total of 696 cases—and streptococci were found in all but 5. Attempts to treat scarlet fever with Marmorek's and other antistreptococcus serum proved negative. Aronson, however, obtained a prepared serum from horses injected with streptococci from scarlet fever subjects, and this serum was used in the treatment of 26 patients with scarlet fever. Two were moribund and a third died with septic symptoms in the third week. The others recovered; 16 with no complications, and 7 with more or less severe complications. The effect of the serum treatment was encouraging, but not so strikingly beneficial as is the case with serum treatment of diphtheria. Baginsky injected 20 c.c. at a time and repeated the injections twice to six times. Further tests are now in progress, and the results are proving more encouraging than those here reported.

60. Surgery of Chronic Nephritis.—An abstract of Rovsing's article was published in *THE JOURNAL* of March 22, p. 796, when it appeared in Danish. See also editorial in *THE JOURNAL*, November 15, p. 1257.

61. Value of Bacteriology in Blood Poisoning.—Canon states that it is now a routine practice at the Moabit Hospital at Berlin to draw 2 to 5 c.c. of blood from the median vein and sow it on agar plates or glasses or in bouillon or to inoculate animals with it, in every case of blood poisoning, progressive phlegmon or general sepsis. This bacteriologic examination of the blood is made as early as possible, and the number of colonies that develop is recorded. The further increase or decrease in the number of colonies

on repeated examination is a criterion of the course of the general infection. In cases of progressive phlegmon in which amputation seems advisable, the question is decided by the increasing or diminishing number of colonies derived from the blood. The patient and his family recognize the necessity for amputation when they can see for themselves the increasing intensity of the sepsis. Canon's experience includes 93 patients and 65 cadavers. Pyogenic cocci were found in the blood in all but 12 of the latter, and death had been due in these cases to some other cause than the sepsis. He has been impressed with the fact that the finding of staphylococci is less important than when streptococci are encountered, especially when the staphylococci are an osteomyelitis. If anaërobic bacteria are found in the local process, they should be cultivated on suitable media as well as the aerobics.

65. True Cysts of the Liver.—Hofmann adds another to the 17 cases of true cysts of the liver which he has collected from the literature. Of the 15 in which the sex was mentioned, 4 of the patients were men and 11 women, including two girls of 11 and 14. All recovered after operation except 6.

66. Trephining for Headache.—Siegel operated on a patient on account of the solitary symptom of headache, and has found 11 similar interventions on record. All had a history of preceding trauma and all were permanently cured by the intervention. In each case there was some visible alteration of the skull at the site of the headache. The bone flaps healed perfectly in place.

68. Nature of Circulatory Disturbances in Acute Infections.—Pässler's latest researches confirm his previous conclusions that the disturbances in the circulation noted at the height of acute infectious diseases are due to paralysis of the vasomotors. The heart does not participate in their production at first. The toxins of diphtheria, however, have a certain action on the heart, altering the rhythm and rendering it less resistant. Nothing of the kind is observed in pneumococcus infection.

72. Uterine Insufficiency.—Atony of the uterus during and after childbirth was described thousands of years ago, but no one, Theilhaber states, has ever called attention to the insufficiency of the uterus which exists outside of the puerperal state. It is the same in kind as the former, and differs only in degree. He describes six various types of insufficiency, hypoplasia or degeneration of the musculature, myofibrosis, collateral hyperemia originating in the adnexa, uterus myomatous, and subinvolution. The consequences of this insufficiency are menorrhagia, metrorrhagia, hyperplasia of the parenchyma or hypersecretion. In all forms of insufficiency of the uterus there is a tendency to prolonged hemorrhages. The hemorrhage may last for weeks, or even months, without any appreciable anomaly in the mucosa. In treatment we have means to induce contractions of the uterus, to diminish the supply of blood to the parts, to reduce the blood pressure or to reduce the hyperplasia of the organ. In certain chlorotic subjects the menorrhagia diminishes after the administration of iron, which seems to contribute toward a new formation of the musculature. In the insufficiency due to troubles in the adnexa, or a myoma, removal of the cause may put an end to the menorrhagia. Hypersecretion may sometimes be controlled by stimulating the uterus to contract. This has long been known by empirical observation, but the reason for it has never been explained before, he remarks. He has found flushing the vagina with hot water a useful measure for this purpose. It has a mechanical action besides the stimulation from the heat. In rebellious cases he commences with water at a temperature of about 57 F. and follows this with an injection at 122 F. Ergot is peculiarly beneficial in case of a myomatous uterus. He recommends sitz baths to reduce local hyperemia, with water not over 77 F. Hydrastis canadensis is a valuable adjuvant, as it has a vasoconstricting action on the vessels in the lower abdomen. It is indicated when ergot fails or when the musculature of the uterus is so degenerated that no aid can be anticipated from ergot. Stypticin has a more general action on the blood pressure. Hyperemia of the uterus may also be controlled by

scarification of the organ or by introducing a tampon impregnated with glycerin. Reduction of the blood pressure in general has also a beneficial effect in cases of metrorrhagia and hypersecretion. This can be accomplished by hydrotherapy and dieting. A course at a watering place may prove beneficial if the patient can resist the temptation to overeat.

73. Malaria.—Gutiérrez has been successful in curing certain old and inveterate cases of malaria by injecting quinin directly into the spleen. Before the injection no young forms of the parasite could be found in the blood, but afterward they were numerous. The effect of the injection was always to precipitate an acute malarial attack, even in old chronic cases long free from such. He assumes that the forms of the parasite encountered in chronic cases and which are refractory to quinin, are stimulated to segmentation by the injection into the spleen, where they are ensconced. The recurring malarial attack coincides with the development of the younger generation, either from the mechanical effect of their eruption from the spleen or from the toxins generated by them.

75. Cold Packs in Pneumonia.—Escomel describes nine severe cases of pneumonia treated by the usual medical measures supplemented by two cold packs a day. Improvement was marked after the first application of the cold, the effect of which on the emunctories, temperature, etc., was promptly beneficial.

New Patents.

- Patents of interest to physicians, etc., October 21 and 28:
- 711697. Machine for testing lungs. Emma Donna, Chicago.
 - 711509. Thermometer attachment for fountain syringes. Ferdinand King, New York City.
 - 711910. Making sodium cyanid. Fritz Roessler, Frankfurt-on-the-Main, Germany.
 - 711605. Apparatus for treatment of diseases. Wm. T. Wells, Columbus, Ohio.
 - 712177. Apparatus for distributing odors. Charles T. Bradshaw, Philadelphia.
 - 712274. Making milk extracts. Otto Eberhard, Ludwigslust, Germany.
 - 712292. Dispensing apparatus for soda water. Charles A. Geddes, Philadelphia.
 - 712375. Human treatment apparatus. Isaac J. Hartford, Bloomington, Ill.
 - 712304. Respirator. Maurice Jacobs, New York City, and A. P. Black, Brooklyn.
 - 712321. Pumigator. Thomas H. McDonald, Elk Grove, Cal.
 - 712436. Therapeutic bath. Anton Pfister-Schmidhauser, St. Gall, Switzerland.
 - 712213. Atomizer. Albert H. Tatum, New York City.
 - 712225. Obtaining calcium sulphate and by-products. Herbert H. Wing, New Brighton, N. Y.
 - 712226. Obtaining alum. Herbert H. Wing, New Brighton, N. Y.
 - 712447. Magnetic medicine holder. Leonidas G. Woolley, Kenton, Ohio.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners, by Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the Collaboration of John B. Murphy, M.D., Chicago; Alexander D. Blackader, M.D., Montreal; H. C. Wood, M.D., Philadelphia; T. M. Rotch, M.D., Boston; E. Landolt, M.D., Paris; Thomas G. Morton, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh, and John Harold, M.D., London, with Regular Correspondents in Montreal, London, Paris, Leipzig, and Vienna. Cloth. Pp. 306. Price, \$2.00. Volume III. Series Twelfth. Philadelphia and London: J. B. Lippincott Company.

DICTIONARY OF PHYSIOLOGY AND PSYCHOLOGY, including Many of the Principal Conceptions of Ethics, Logic, Esthetics, Philosophy of Religion, Mental Pathology, Anthropology, Biology, Neurology, Physiology, Economics, Political and Social Philosophy, Philology, Physical Science and Education, and Giving a Terminology in English, French, German and Italian. Written by Many Hands and Edited by James Mark Baldwin, Ph.D. (Princeton), Hon. D.Sc. (Oxon.), Hon. LL.D. (Glasgow), Stuart Professor in Princeton University. With the Coöperation and Assistance of an International Board of Consulting Editors. In Three Volumes, with Illustrations and Extensive Bibliographies. Vol. II. Cloth. Pp. 892. Price, \$5.00. New York and London: Macmillan & Co., Ltd. 1902.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P.

Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume I. General Medicine. Edited by Frank Billings, M.S., M.D., Head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, and J. H. Salisbury, M.D., Professor of Medicine, Chicago Clinical School. October, 1902. Cloth. Pp. 358. Price, \$1.50. Chicago: The Year-Book Publishers.

A HANDBOOK OF MATERIA MEDICA, PHARMACY AND THERAPEUTICS, Including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy, and Minute Directions for Prescription Writing. By Samuel O. L. Potter, A.M., M.D., M.R.C.P. Lond., Formerly Professor of the Principles and Practice of Medicine in the Cooper Medical College of San Francisco. Ninth Edition, revised and Enlarged. Cloth. Pp. 951. Price, \$5.00. Philadelphia: P. Blakiston's Son & Co. 1902.

THE PRACTICE OF SURGERY. A Treatise on Surgery for the Use of Practitioners and Students. By Henry R. Wharton, M.D., Clinical Professor of Surgery, Woman's Medical College of Pennsylvania, and B. Farquhar Curtis, M.D., Professor of Clinical Surgery and Adjunct Professor of the Principles of Surgery in the University and Bellevue Medical College of New York. Profusely Illustrated. Third Edition. Cloth. Pp. 1241. Price, \$6.50. Philadelphia and London: J. B. Lippincott Co. 1902.

DISEASES OF THE SKIN. A Manual for Students and Practitioners. By Joseph Grindon, Ph.B., M.D., Professor of Clinical Dermatology and Syphilis, Washington University. Series Edited by Bern B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons. Illustrated with 39 Engravings. Cloth. Pp. 377. Price, \$2.00. Philadelphia and New York: Lea Brothers & Co.

A TREATISE ON MASSAGE. Its History, Mode of Application and Effects, Indications and Contraindications. By Douglas Graham, M.D., of Boston, Mass., Member of the American Association for the Advancement of Science. Third Edition, Revised, Enlarged and Illustrated. Cloth. Pp. 462. Price, \$4.00. Philadelphia and London: J. B. Lippincott Co. 1902.

THE SCIENCE AND ART OF PRESCRIBING. E. H. Colbeck, B.A., M.D. (Cantab.), M.R.C.P., (Lond.), D.P.H. (Cantab.), Physician to Out-Patients at the City of London Hospital, and Arnold Chaplin, B.A., M.D. (Cantab.), M.R.C.P. (Lond.), Physician to Out-Patients at the City of London Hospital. Cloth. Pp. 183. Price, \$0.57. London: Henry Kimpton. 1902.

A PLAN FOR THE STUDY OF MAN, with Reference to Bills to Establish a Laboratory for the Study of the Criminal, Pauper and Defective Classes, with a Bibliography of Child Study. By Arthur MacDonald, Specialist in the United States Bureau of Education, Washington, D. C. Paper. Pp. 166. Washington: Government Printing Office. 1902.

ANLEITUNG DIAGNOSE UND THERAPIE DER KEHLKOPF, NASEN UND OHRENKRANKHEITEN. Vorlesungen gehalten in Fortbildungscursen für praktische Aerzte von Dr. Richard Kayser, in Breslau. Zweite vermehrte und verbesserte Auflage. Mit 130 Abbildungen. Paper. Pp. 178. Berlin: S. Karger. 1903.

A TEXT-BOOK OF THE SCIENCE AND ART OF OBSTETRICS. By Henry J. Garrigues, A.M., M.D., Consulting Obstetric Surgeon to the New York Maternity Hospital. With 504 Illustrations. Cloth. Pp. 844. Price, \$5.00. Philadelphia and London: J. B. Lippincott Co. 1902.

TASCHENBUCH DER MASSAGE. Für Studierende und Aerzte. Von Dr. Frich Ekgren an der III medicinischen Universitätsklinik zu Berlin. Mit einem Vorwort von Geh. Med.-Rath Prof. Dr. H. Senator. Mit 11 Abbildungen. Cloth. Pp. 90. Berlin: S. Karger. 1903.

THE BLOOD: HOW TO EXAMINE AND DIAGNOSE ITS DISEASES. By Alfred C. Coles, M.D., B.Sc., of Public Health, Edinburgh. Second Edition. With Six Colored Plates. Cloth. Pp. 286. Price, \$3.67 net. Philadelphia: P. Blakiston's Son & Co. 1902.

SEVENTY-EIGHTH REPORT OF THE ROYAL SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS. Paper. Pp. 128. Price 1s. to Non-Members; by Post 1s. 3d.; by Continental Post, 1s. 4d. London: Secretary, John Colam.

REPORT OF THE SURGEON-GENERAL OF THE ARMY to the Secretary of War for the Fiscal Year Ending June 30, 1902. Paper. Pp. 185. Washington: Government Printing Office. 1902.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, directed by orders from the Adjutant-General's Office, Washington, D. C., from Nov. 1 to 7, 1902:

Austin, R. E., contract surgeon, U. S. A., is granted leave of absence for two months, to take effect Nov. 20, 1902.
Carroll, James, first lieutenant and asst.-surgeon, U. S. A., will report in person to the Surgeon-General of the Army for assignment to duty as assistant curator of the Army Medical Museum.
DeWitt, Wallace, first lieutenant and asst.-surgeon, U. S. A., will report to the president of the faculty of the Army Medical School for the course of instruction prescribed by paragraphs 452 and 453, Army Regulations.
Edger, Benj. J., first lieutenant and asst.-surgeon, U. S. A., will report in person to the commanding general, Department of California, for temporary duty at the U. S. General Hospital at San Francisco.
Grubbs, Robert B., first lieutenant and asst.-surgeon, U. S. A., will report to the commanding general, Department of California, for duty at the U. S. General Hospital, San Francisco.
Minor, John F., captain and asst.-surgeon, U. S. V., is honorably discharged, to take effect Dec. 10, 1902, his services being no longer required.
Perley, Harry O., major and surgeon, U. S. A., is granted leave of absence for ten days.
Porter, Ralph S., major and surgeon, U. S. V., is honorably discharged, to take effect Nov. 12, 1902, his services being no longer required.

Price, Richard J., contract surgeon, U. S. A., will proceed to Ft. Bayard, N. M., and report to the commanding officer, U. S. General Hospital, for treatment.

The following named officers are honorably discharged, to take effect Dec. 9, 1902, their services being no longer required:
Major Thomas B. Anderson, surgeon, U. S. V.
Major Robert P. Robins, surgeon, U. S. V.
Major Charles H. Andrews, surgeon, U. S. V.
Major Frank H. Titus, surgeon, U. S. V.
Captain George W. Daywalt, asst.-surgeon, U. S. V.
Captain James K. Stockard, asst.-surgeon, U. S. V.
Captain Clarence H. Long, asst.-surgeon, U. S. V.
Captain George K. Sims, asst.-surgeon, U. S. V.
Captain William Aldin, asst.-surgeon, U. S. V.
Captain Willis Raynor, asst.-surgeon, U. S. V.
Sinks, Edward D., captain and asst.-surgeon, U. S. V., is honorably discharged, to take effect Nov. 15, 1902, his services being no longer required.

Marine-Hospital Changes.

Official list of the changes of station and duties of commission and non-commissioned officers of the Public Health and Marine Hospital Service for the seven days ended Nov. 6, 1902:

Assistant Surgeon-General J. H. White, granted leave of absence for 15 days from November 8.

Surgeon G. M. Magruder, granted leave of absence for 12 days from November 17.

P. A. Surgeon L. E. Cofer, relieved from temporary duty at Immigration Depot, New York.

Asst.-Surgeon W. A. Korn, granted leave of absence for 21 days from November 18.

Asst.-Surgeon J. S. Boggess, granted seven days' extension leave of absence from November 16.

A. A. Surgeon E. Alexander, granted two days' extension of leave of absence.

Medical Inspector Agnes Walker, granted leave of absence for 15 days from November 1.

Senior Pharmacist T. V. O'Gorman, relieved from duty at Louisville, Ky., and directed to proceed to New Orleans, and report the medical officer in command for duty and assignment to quarter

BOARD CONVENED.

Board convened at Port Townsend, Washington, Nov. 4, 1902 for the physical examination of such officers of the Revenue Cutter Service as may present themselves. Detail for the Board: P. A. Surgeon C. H. Gardner, chairman. Asst.-Surgeon M. H. Foster, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 8, 1902:

SMALLPOX—UNITED STATES.

California: San Francisco, Oct. 18-26, 1 case.
Colorado: Denver, Oct. 18-25, 1 case.
Illinois: Chicago, Oct. 25-Nov. 1, 2 cases.
Indiana: Indianapolis, Oct. 25-Nov. 1, 1 case.
Iowa: Ottumwa, Sept. 27-Nov. 1, 2 cases.
Kansas: Wichita, Oct. 24-Nov. 1, 1 case.
Kentucky: Covington, Oct. 18-Nov. 1, 22 cases; Lexington, Oct. 25-Nov. 1, 12 cases.
Maine: Biddeford, Oct. 25-Nov. 1, 1 case.
Massachusetts: Oct. 25-Nov. 1, Boston, 18 cases, 4 deaths; Cambridge, 1 case; Everett, 1 case.
Michigan: Oct. 25-Nov. 1, Detroit, 13 cases; Grand Rapids, 1 case.
New Hampshire: Nashua, Oct. 25-Nov. 1, 23 cases.
New York: Oct. 25-Nov. 1, Binghamton, 1 case; New York, 1 case; 1 death.
Ohio: Cincinnati, Oct. 24-31, 3 cases; Cleveland, Oct. 25-Nov. 1, 11 cases, 8 deaths; Dayton, Oct. 25-Nov. 1, 1 case; Youngstown, Oct. 18-Nov. 1, 1 case; 1 death.
Pennsylvania: Oct. 25-Nov. 1, Altoona, 4 cases; Erie, 3 cases; Johnstown, 6 cases; McKeesport, 3 cases, 1 death; Pittsburg, 18 cases, 6 deaths, 2 imported.
South Carolina: Charleston, Oct. 18-25, 2 cases.
Wisconsin: Milwaukee, Oct. 25-Nov. 1, 10 cases, 1 death.

SMALLPOX—FOREIGN.

Austria: Prague, Oct. 4-11, 8 cases.
Belgium: Oct. 11-18, Antwerp, 1 case; Ghent, 2 deaths.
Canada: Amherstburg, Oct. 18-Nov. 1, 3 cases; Quebec, Oct. 25-Nov. 1, 1 case.
Ecuador: Guayaquil, Oct. 12-19, 3 deaths.
France: Paris, Oct. 11-18, 1 death; Rhelms, Oct. 12-19, 1 death.
Great Britain: Liverpool, Oct. 11-25, 21 cases; London, Oct. 11-18, 4 cases.
India: Bombay, Sept. 30-Oct. 7, 1 death.
Russia: Moscow, Oct. 4-11, 3 cases, 1 death; Odessa, Oct. 11-18, 1 case; St. Petersburg, Oct. 4-18, 8 cases, 5 deaths.
Straits Settlements: Singapore, Sept. 6-20, 5 deaths.
Turkey: Constantinople, Oct. 12-19, 1 death.

YELLOW FEVER.

Columbia: Panama, Oct. 13-27, 12 cases, 1 death.
Ecuador: Guayaquil, Oct. 12-19, 1 death.

CHOLERA.

China: Hongkong, Sept. 20-Oct. 4, 5 cases, 4 deaths.
Egypt: Alexandria, Oct. 4-11, 72 cases, 71 deaths.
India: Bombay, Sept. 30-Oct. 7, 2 deaths; Madras, Sept. 20-Oct. 3, 3 cases, 3 deaths.
Japan: To Sept. 30, 11,228 cases, 6,302 deaths.
Korea: Seoul, Sept. 27, between 50 and 250 deaths daily.
Straits Settlements: Singapore, Sept. 6-20, 15 deaths.

PLAGUE.

India: Bombay, Sept. 30-Oct. 7, 112 deaths; Karachi, Sept. 28-Oct. 5, 27 cases, 22 deaths.
Japan: Yokohama, Sept. 27-Oct. 4, 1 death.

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Original Articles.

SYMMETRICAL GANGRENE (RAYNAUD'S) VERSUS ENDARTERITIS OBLITERANS.*

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PHYSICIAN GARFIELD HOSPITAL, ETC.

WASHINGTON, D. C.

SUMMARY.

1. Its Anatomic and Physiologic Consideration.
2. Relative Infrequency of Raynaud's Disease.
3. History of Two Remarkable Cases.
4. Etiology Relations of Each Disease to Other Morbid Conditions.
5. Progress and Termination of Each Disease.
6. Treatment.

INTRODUCTION.

Since the establishment of pathologic laboratories has come to be a necessity in all well-equipped hospitals, our knowledge of the etiology, progress and termination of disease has advanced *pari passu*. It may be easier and quicker to pass upon diseased processes without the labor and proper time spent in pathologic research, but true reasoning and systematic and correct classification of disease can only be obtained by comparison of the healthy and diseased areas.

There is, however, no question that in the subject under consideration in this paper, that the drawing of the line too sharply between similar diseases and the same diseases, has been the cause of much confusion and doubt, and too many phenomena have been looked upon as Raynaud's and too few as other diseases. It is openly held by many able clinicians that such a condition as true Raynaud's disease does not exist; others take the middle ground and speak of those cases as Raynaud's in which there are stages of syncope or asphyxia and gangrene, even though they show on examination a proliferation of the intima with partial or complete occlusion of the vessel. The question also arises, are there some cases in which this occlusion is due to a thrombus, which has become organized and is independent of the intima, but caused primarily by a disturbance in the circulation, dependent upon a vasomotor origin? The time necessary for the formation of a thrombus and its organization enters very sharply into the consideration of one of these cases presented. Zeigler thinks that a clot could hardly organize in less than a week or ten days; the rapidity in which the disease made its appearance in the case to be presented would seem to remove the theory of connective tissue growth as the incentive cause.

ANATOMIC AND PHYSIOLOGIC CONSIDERATION.

It seems to be the smaller blood vessels that are affected first in Raynaud's disease. The smaller the artery the more muscular is its middle coat, and so it is more capable of active changes in its caliber. Raynaud said the disease was due to a vicious innervation of the capillary system. The nerves, which are derived from the sympathetic system, penetrate the outer coat of the arteries to reach the muscular tissue of the medium, and these nerves, which are the dilators and constrictors of the blood supply, are controlled through their center in the spinal cord—the messages coming either from the periphery in the way of cold, heat, dampness, etc., or from the center by the toxicity of the blood or by way of higher mental and psychical impressions. It is a fact that uric acid in the blood is capable of causing vasomotor disturbance.

Many diseases may have the same appearance, yet arise from entirely different causes. The gangrene may be most extensive in both, and the ages of the patients may be about the same. Microscopically, the parts have little to differentiate them. The microscope may aid us as to the starting proliferation of the intima, showing changes in the muscular and thickening of the outer coat. Friedländer's disease (or obliterative arteritis (described in 1876) generally shows neuritis. In Raynaud's, even where there is gangrene, we do not necessarily find neuritis, and if it occurs it has been claimed by Dehio, Barlow, Collier and West that it is secondary to the gangrene. In short, as Monro says, Raynaud's gangrene may occur without neuritis, and apparently without either arterial disease or neuritis. It is explained that the nervous element in Raynaud's causes an abnormal excitability of the vasomotor centers in the spinal cord, producing a spasm of the vessels; this excitability of the vasomotor center may be brought about by stimulation of the centers by poisonings in the blood and reflexly by agents acting on the periphery.

RELATIVE INFREQUENCY OF RAYNAUD'S DISEASE.

There is no doubt that true Raynaud's disease is very much of a curiosity. It is beyond question a fact that many cases of symmetrical gangrene are tabulated as Raynaud's, when an examination of the arterial system would have shown hardened arteries with perhaps hypertrophied heart, accentuated diastolic aortic sound, or displaced apex beat. Further examination of the dead area in section, either macroscopically or microscopically, would reveal occluded vessels, both in and above the necrotic region. A continued paroxysmal contraction in the vessel may lead to thrombosis, but there should not be in true Raynaud's a proliferation of the cells of the intima, leading thereby to a slowing in the blood current, and a necessary following of thrombosis.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Frederick Peterson, Richard Dewey and H. A. Tomlinson.

HISTORY OF TWO REMARKABLE CASES.

One of these two cases which I here report can very clearly be put down as endarteritis obliterans; the other has so many remarkable and analogous features to Raynaud's disease that its tabulation is even yet in much doubt.

CASE 1.—A Jew, aged 35, who had always enjoyed good health up to the age of 25.

Family History.—Father died when eighty of tuberculosis. Mother died during confinement.

Previous History.—Born in Poland. Was a healthy child. Made good recoveries from the usual diseases of childhood. Had malarial fever five months ago. Has always been healthy other than gangrene in right leg ten years ago. "The gangrene in the first instance came from frost bite." The history of specific disease could not be obtained, and only an exposure to extreme cold during severe army service in Europe, some ten years ago, could be found as a contributing cause to the extreme gangrene.

Present Illness.—First noticed trouble with left leg about four months ago. Went to hospital. The gangrene began in the toes first and gradually worked up. Contraction in the leg began about the same time as the gangrene.

Examination.—The radial arteries were found calcareous and nodular, especially the right. The heart sounds were feeble, but clear of murmurs. Examination of the fundus of the eye showed the vessels markedly narrowed. The urine was of low specific gravity (1006), but otherwise normal. Temperature ranged from 95 F. to 104.4.

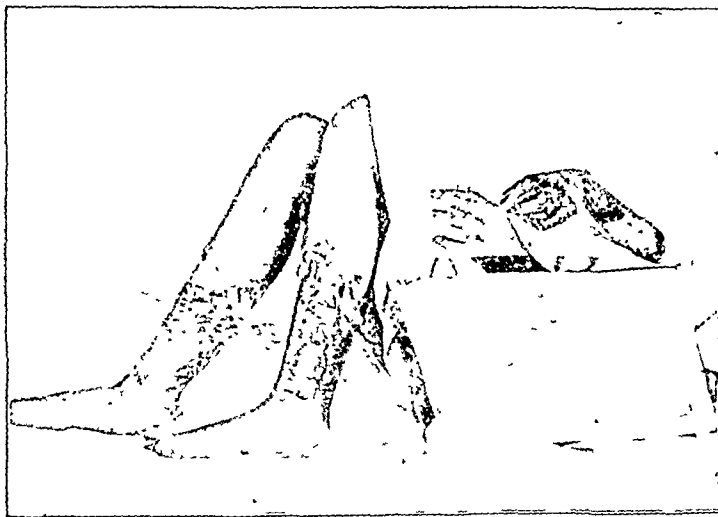


Fig. 1.—Symmetrical gangrene.

Operation.—By Dr. Thompson. Left knee of thigh aseptically prepared. Incision beginning at upper end of lower third on outer side of thigh and extending down, making a long anterior flap. The periosteum was dissected back and the femur sawed through at the junction of the lower and middle thirds. The arteries were found to be extremely calcareous. The muscles were sewed together over the bone with catgut and the wound was closed with interrupted sutures of silkworm gut. The parts failed to heal properly after operation and patient died of asthenia, about two weeks afterward.

The second case was very remarkable from the extensive gangrene, which simultaneously attacked all four extremities, being preceded by previous good health and with only very short premonitory symptoms of tingling, numbness, heaviness and deadness of the extremities. A condensed history, with a photograph of the patient (Fig. 1) and photo-micrographs of sections (Figs. 2 and 3), together with drawings of the parts by H. C. Macatee, M.D. (Figs. 4, 5 and 6), and notes of the pathologist of Garfield Hospital, Dr. Nichols, are here presented. In addition, the notes of the ophthalmologist, Dr. W. K. Butler, who made several examinations of the fundus of the eye at different times is also added.

CASE 2.—*History.*—Maria Harris, colored, aged 35, married, born in South Carolina, laundress, entered Garfield Hospital, Washington, D. C., Nov. 19, 1901, in the service of Dr. J. D. Morgan.

Previous History.—Healthy child, had pertussis and measles in childhood; had rheumatism, principally in shoulders, for two weeks in January, 1901; otherwise enjoyed good health. Always worked hard. Married but no children, no miscarriages or abortions; no menstrual disorders. No history of ergotism, no specific history.

Present Sickness.—Latter part of October, 1901, about mid-day was taken with severe paroxysm of vomiting, and same day, hands and feet felt numb, and very soon following this (few days) tips of fingers commenced to turn dark and dark-greenish, and there was trouble in using them. Had difficulty in walking and found that tips of toes were black and cold; the process beginning at the tips of fingers and toes and working upward, the right hand more than the left. Patient suffered at times, but not greatly.

Examination.—On entrance to hospital, temperature 97.6 F. Anemic. No gastric or intestinal symptoms; bowels regular; appetite good. No respiratory symptoms. Systolic murmur at aortic orifice; heard at apex, but intensified upward toward the second intercostal space, right side. Arteries soft and compressible; no tension or hardness. Leucocytes vary from 6000 to 15,000 per cm. Nov. 26, 1901, leucocytes were 30,000. Urine: sp. gr. 1006 to 1010, otherwise negative. Both legs and right hand highly gangrenous (see Fig. 1); left hand had tips of three fingers black and shriveled; very marked odor; no lines of demarcation.

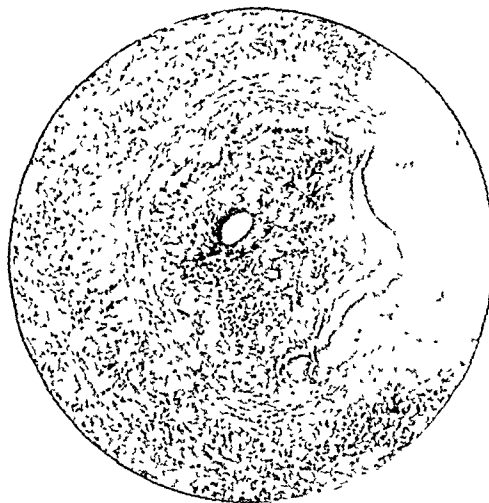


Fig. 2.—Anterior tibial. Magnification 35 diameters. Showing vessel filled with an organized granulation tissue. Little or no thickening of intima.

First Amputation.—Dec. 26, 1901, by Dr. Snyder. Parts all now thoroughly demarked, with healthy granulations. Patient's general condition very good. Removed right hand above wrist and left leg just below knee. Before amputation, temperature most of the time normal, except on two or three occasions it went to 101 F.; after first amputation between 100 to 101 for four or five days.

Second Amputation.—Jan. 16, 1902. Chloroform the anesthetic. Removed right leg below knee. Temperature after second amputation from 99 F. to 101 F. for one day. The three fingers of the left hand required no surgical treatment, but healed gradually and properly, with only the loss of the nails and thickened epidermis.

Results.—May 17, 1902. No return of disease, patient well. Appetite good, is cheerful, has gained flesh, no pain or fever.

Treatment.—Parts soaked daily for 10 minutes in 2 per cent. carbolic acid solution of temperature 110 F.; wrapped in absorbent cotton. Whiskey, strychnia, nitro-glycerin and nutritious diet given freely. Galvanism of parts q. a. d. Anode to spine and cathode to hand or leg (descending). No sedatives or narcotics used at any time.

Macroscopic Examination.—By Dr. Nichols, Dec. 27, 1901: The specimen consists of a leg completely gangrenous from

the middle down. The gangrenous portion is separated from healthy portion by a broad interval of demarcation, 1 to 2 cm., crossed only by tibia and fibula, and a few dead shreds. The stump, above the self-amputated soft tissues, presents a granulating surface. About 5 or 6 cm. of the tissues, above the line of demarcation, were removed in the amputation, and are available for examination. In cross-section, about 5 cm. above the line of separation, the anterior and posterior tibial arteries appear completely occluded by a white tissue. At lower level, 4 cm., these vessels appear similarly occluded, but the material is of a deep brown color, like a thrombus.

Microscopic Examination.—Cross section about 5 cm. above line of separation shows posterior tibial artery completely occluded, and anterior almost, by a growth of connective tissue, continuous with the tunica intima; although directly continuous with the tunica intima, it is different in character, and there does not appear any real thickening of the tunica intima; the new tissue has capillaries and small blood vessels. At 4 cm., same condition, except cells filled with brown pigments (broken down blood pigment). One of the tibial veins and few small arteries show distinct and marked thickening of tunica intima (obliterating endarteritis). Nerve trunks show no morbid changes.

Examination of Fundus of Eye.—Right eye: media clear, retinal arteries apparently normal size, veins apparently slightly enlarged. Left, nerve head not as clear as right, light streak on arteries, not well defined. Vessels appear normal, perhaps slightly smaller in caliber.

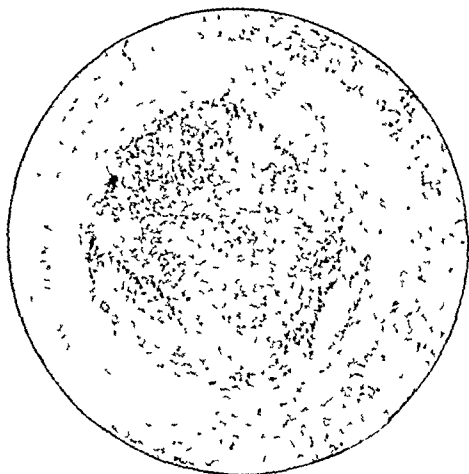


Fig. 3.—Posterior tibial. Magnification 25 diameters. Showing vessel filled with an organized granulation tissue. Little or no thickening of intima.

The notes of this case were sent to Professor Osler at Johns Hopkins, and also to Prof. Thomas K. Monro of Glasgow, who has written most extensively recently of Raynaud's disease. The letters of comment on the case are here presented:

BALTIMORE, Md., Feb. 19, 1902

Dear Dr. Morgan:—Thanks for your paper. What a remarkable case! It belongs to a group of very great interest, and cases are more common in children than in adults. Very much obliged indeed for the photograph. I have long been collecting these cases. You should report it

Sincerely yours,

W. OSLER

GLASGOW, SCOTLAND, March 20, 1902

Dear Dr. Morgan:—Thank you very much for the notes of the case of symmetrical gangrene, and for the excellent photo, which reached me in safety.

The case is one of a remarkable group with regard to which anatomic observations such as yours are particularly desirable. In this case, *disease of the arteries is clearly not the cause of the gangrene*; first, because the anatomic investigation appears to exclude it, and second, because the simultaneous and acute or sudden onset in all the limbs is quite inconsistent with such a theory. The history of a recent attack of rheumatism and

the presence of a cardiac murmur raise the question of embolism, but we can not suppose that this would occur simultaneously in all the limbs, while sparing the rest of the body. Neuritis is, of course, excluded by the anatomic investigation and by what we know of the symptoms of that disease.

Different views are held by different observers as to the nature of such cases as the present one, and I have briefly alluded to the subject in my monograph (pp. 208-9, 102, 106-7, 173). Prof. Osler ("Prin. and Pract. of Med.," 4th ed., p. 1138) and others admit them to the category of Raynaud's Disease, but to do this, we must make the expression "Raynaud's Disease" more comprehensive than is consistent with Raynaud's own theory of the affection. If an intense increase of vasoconstrictor activity exists in the limbs for a few hours, and then



Fig. 4.—Symmetrical gangrene. Second case

passes off permanently, leaving gangrene behind it, we can scarcely refer it to increased excitability of the vasomotor. It seems possible that some agent (toxic, reflex or otherwise), having itself only a transient influence or existence in the body, caused an intense but transitory stimulation of the vasoconstrictor center. It is indeed strange that such paroxysms should not recur. With kind regards, yours very truly,

10 Clairmont Gardens.

T. K. MONRO.

ETIOLOGY; RELATION OF EACH DISEASE TO OTHER MORBID CONDITIONS.

Both Raynaud's and endarteritis obliterans occur frequently in middle life. Cases of Raynaud's have been

reported as occurring as early as three months (W. W. Johnston), and are more frequent in females. Endarteritis obliterans has been reported as occurring as early as twenty-three, and is more frequent in males. The first symptoms in one of the writer's cases were at twenty-five, and were so severe and progressive that one limb was amputated for gangrene. The development of gangrene in the old rather excludes a diagnosis of Raynaud's or primary endarteritis obliterans. Raynaud found his cases so often in the young that he proposed calling it "juvenile gangrene." Senile gangrene is typically unilateral, and if symmetrical not *synchronously*. The structural change in the blood vessel leading to proliferation of the intima is not sufficient of itself, even in young adults, to make the case pathognomonic of syphilis. The history of syphilis in Raynaud is considered more of a coincidence, than causative agent.

Raynaud contended that one essential was necessary, the successive paroxysms of syncope, asphyxia, leading finally to gangrene; that the paroxysms were spasmodic and that there were frequent and recurrent contractions of the walls of the arterioles supplying the extremities attacked. It was noted that a considerable number occurred in the first ten years of life, then fell off and became numerous again at fifteen to thirty years. The evolution of the nervous system in the female and occupation in the male was put down by Monro as the distinctive cause.

Phlebitis leads to moist gangrene; it is seldom symmetrical, and the gangrene is generally fatal.

Among the other causes in Raynaud's disease, heredity is put down as responsible in 8 per cent.; exposure to cold is a predisposing cause, and so also is rheumatism (7 per cent.); malarial fever often seems also associated with the disease. Tuberculosis is found in 6 per cent. of cases. Leucocythemia is rarely noted, but nephritic trouble is associated in 17 per cent. of the cases.

There is little resemblance to peripheral neuritis. The symptoms of incoördination, tenderness of muscles and nerves, with paralyses, make the case clear. There is a large field of cases which has been referred to as acro-neuroses (Dana, 1885), under which Raynaud's disease may perhaps be indefinitely classed. Disturbances of the nervous system have been referred to as being the cause in 4 per cent. of the cases. G. S. Badger, M.D., in a recent article, says: "It has been noticed particularly in asylum cases, as a manifestation of hysteria, and as a complication occurring in the course of many organic nervous affections." A letter from the Government Hospital for the Insane, which has nearly 2500 inmates and the experience of Drs. Richardson and Stack, who have come in contact with over 10,000 asylum cases would seem to put Raynaud's disease as less frequent in asylum cases than any place else.



Fig. 5.—Symmetrical gangrene. Second case.

Among rare contributing causes of symmetrical gangrene Raynaud admits valvular defects and congenital narrowing of the aorta and of the systemic arteries. Diseases of the cardio-vascular system are found in fully 12 per cent. of cases, and aortic systolic murmur in 5 per cent. of the 12 per cent. of cardiac cases (Monro). Embolism is rarely symmetrical, and it would be remarkable indeed for emboli to lodge in all four extremities and do no damage elsewhere.

Glycosuria cases are not easily mistaken. The examination of the urine and the whole history and appearance of the parts characterize the diseases. Of the modifications of sensations, analgesia is the most common; although the sense of touch is blunted, still the appreciation between heat and cold is distinct. Warm applications were most grateful in the case of the writer, whereas cold seemed to cause suffering. There is a similarity between hemoglobinuria and Raynaud's disease, in that exposure to cold produces paroxysms; but in the one case the nerves and walls of the blood vessels suffer, in the other the blood and the blood-producing organs; in hemoglobinuria we often find albumin, hemoglobin, and even red corpuscles in the urine. Cases of erythromelalgia seldom lead to gangrene, and are aggravated by warmth and relieved by cold; the pain is generally present and the ulceration is confined to one extremity.



Fig. 6.—Symmetrical gangrene. Second case. No loss of fingers entirely well.

GOVERNMENT HOSPITAL FOR THE INSANE.

A. B. Richardson, M.D., Supt.

WASHINGTON, D. C., May 5, 1902.

Dear Doctor Morgan:—I inclose the data of the case of Raynaud's disease as furnished by Drs. Stack and Pulliam, who had the patient in charge. I am sorry I can add nothing to what is given, as this is the only case I have ever seen. You have, of course, the verbal assurance of Dr. Richardson that in a long experience he has not met with a case; and the case now under consideration is the only one seen during the long service of Dr. Stack in this institution. Hoping that I may have the pleasure of hearing your paper, I am, yours very sincerely,

I. W. BLACKBURN.

SYNOPSIS OF CASE OF RAYNAUD'S DISEASE IN WARDS OF DR. STACK.

"C. Mc., aged 66; married; occupation, laborer and soldier; nativity, Ireland. Previous history, addicted to excessive use of alcohol. He has had epilepsy for several years. Present attack: On February 2 patient complained of his feet paining him very much, and on examination I found that a number of blebs had formed on toes, soles of feet and instep of one foot; these blebs were opened and dressed antiseptically. February 3, examination revealed that the blebs had filled again, and the contained serum had undergone a certain amount of organization; following this the pain passed away and the toes became very black and the superficial structures sloughed off, leaving a pearly white base to ulcer. In a few days the toes became very

much inflamed and somewhat painful, but the pain lasted only a day. The toes remained in this condition for about one month, with but very little change. The ulcers healed gradually, and the inflammation subsided; the nails were cast off about one month after the onset. The patient's toes are now entirely healed and give him no trouble at all."

J. M. PULLIAM.

A case recorded by Dehio, and reported by Mouro, offers a striking proof that Raynaud's symmetrical gangrene can occur as an independent and typical disease in persons otherwise healthy: the patient was a woman, aged 31, and the disease followed a severe fright due to an assault at night by several men. There was extensive gangrene and the parts were amputated seven months after the onset. The vessels showed on examination a fibrous endarteritis and endophlebitis. The lumen in some vessels was completely obstructed by partially organized thrombi, but here, too, the fibrous thickening of the intima was distinct.

PROGRESS AND TERMINATION.

Raynaud's disease never causes death and seldom shortens life. Why it should cease is sometimes quite as mysterious as why it should begin. With the gangrene there is seldom any sepsis; the parts tend to demarcation, and it is better not to amputate; anyhow, always wait for healthy granulation. Arterial obstruction in typhoid, which leads to gangrene, is generally fatal. Senile gangrene affects by preference the lower extremities; it is progressive and serious. Other diseases associated with gangrene generally tend to fatal termination.

TREATMENT.

In Raynaud's and those strongly simulating it, the treatment has been given in the history of one of the cases. With regard to the other cases, the treatment is not so successful. A natural and easy trend in life is much better in those with arterial degeneration. The iodids and nitrites are of use. Among the baths, a course of Nauheim (which can be followed here or abroad) give best results. A scrupulous regulation of all the functions of the body, with the avoidance both of alcohol and of choking the system with improper and too much food, and a regular and systematic outdoor life and exercise, are the cardinal points. If gangrene should appear in endarteritis obliterans, the sooner you operate, the better the result.

919 McPherson Square

A SIMPLE SINGLE-DISC EYE MIRROR.

THE WORKING OPHTHALMOSCOPE FOR THE EYE SPECIALIST AND GENERAL PRACTITIONER, AND HOW TO USE IT

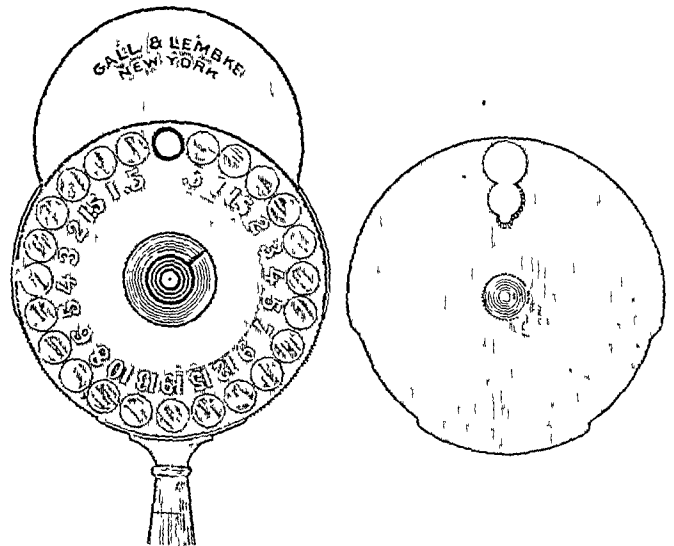
HERMAN KNAPP, M.D.

NEW YORK CITY.

The many modifications of Helmholtz's eye mirror in the course of fifty years show that there was at first a tendency to simplification, to make the original instrument handier and more expeditious. Thus the small Liebreich's ophthalmoscope, a concave mirror with a clip behind the sight-hole for a few lenses, mainly destined to correct the physician's myopia, readily became very popular on account of its easy handling and the brilliancy of the fundus image, which never has been surpassed. The inconvenient clip was soon replaced by a disc revolving on the back surface of the mirror, putting a number of correcting lenses successively behind the sight-

hole. This has been the most important practical improvement of Helmholtz's instrument. Large demonstration ophthalmoscopes soon followed, from Ruete's instrument to Thorner's, the latter being a marvel in distinctness and brilliancy of the picture, which is free from reflexes and larger than the erect image. All those instruments are not for daily practice.

The advantages of determining objectively the optical condition of the eye led to the construction of the so-called refraction ophthalmoscopes. The new features which they introduced were the increase of correcting lenses, to be placed in one or several revolving discs, and the tilting of the mirror by Dr. Wadsworth of Boston, to obviate the disturbing astigmatic effect when the rays of light fall very obliquely on the correcting lenses. Applying those principles in diversified manner has produced a multitude of ophthalmoscopes, ingenious in design, complicated in construction, and more or less cumbersome, without surpassing, mostly falling behind, the distinctness and brilliancy of the small Liebreich (he constructed also a large demonstration ophthalmoscope), or the simple mirror with a sufficient number of lenses in a Rekoss disc. The latter is the working ophthalmoscope which I have constantly used in private and hospital practice, and I have not found any occasion to replace it by a better one these thirty years.



The concave glass mirror has a sight-hole of 3 mm. The rotating disc has one empty hole and 23 fitted with small lenses, from + 0.50D. to 12D., and from -0.50D. upto -20D. The rotating disc applies close to the edges of the sight-hole of the mirror, so that the walls formed by the sight-hole in the mirror and those of the rotating disc which holds the lenses are reduced to the smallest possible dimensions. This is important in order to let enough light through and avoid the unpleasant reflexes from the canal walls. If these walls are well blackened they cast no appreciable reflex on the eye. The blackening is easy, and even if the mirror is constantly used the blackening need not be repeated for many months. I do not usually put my mirror into its case, but carry it in the breast pocket of my coat, constantly taking it in and out. The lenses may gather a little dust, which is easily removed with a camel's hair brush or with a cotton-tipped probe every now and then. What soils the glasses and interferes with sight is fat from the fingers and similar sticky substances which prevent the regular refraction of the rays of light. The correcting lenses are, however, well protected in front by the mirror, be-

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. Frank Allport, H. V. Wurdemann and J. A. Lippincott.

hind by a metal plate covering the rotating disc. Two convex lenses, one of 24D., the other of 12D., complete the ophthalmoscope.

The best light for ophthalmoscopy, so far as I know at this time, is an Argand gas burner, or a broad, round oil or kerosene lamp, because both are not too glaring and have the same kind of light which is reflected from the background of the eye, namely, yellowish-red. Electric and Welsbach light have not given me the same satisfaction. Habit plays a great part in this work, and any coming month may bring us a better light for our examinations than gas.

After having made a careful ocular inspection and a cursory functional examination (sight and visual field) of the eye, the patient is taken into a dark room and the anterior part of his eye is examined with oblique light. This is a very important examination, revealing minute abnormalities in cornea, anterior chamber, iris, lens and anterior part of the vitreous. After that you examine the patient's eye with the ophthalmoscope by transmitted light, either without or better with a convex lens behind the sight-hole, and see whether you get the normal (uniformly red) fundus reflex or whether it differs from it totally or in one or several parts of the pupil. This reveals abnormalities of the refractive media, cornea, lens and vitreous, always using a + lens behind the sight-hole of the mirror, so as to look with relaxed accommodation. For the emmetropic eye this is + 3D. or + 4D., for ametropic eyes their distance glass has to be added. For opacities in the anterior part of the eye a stronger lens is often very useful for distinguishing small objects, such as minute dots on the posterior surface of the cornea, or the fine dots and streaks in primary and secondary cataracts. Unless the eye is very myopic or very hyperopic you see nothing of the background.

The background can be examined in the inverted or in the erect image. I have been taught to begin with the inverted image, also using constantly a + lens of 3D. or 4D., so as to get into the habit of always looking with relaxed accommodation, which will give an enlarged image, almost the size of the erect. The patient stands or sits near the light, you throw the light into the pupil (previously dilated if too small), then you hold the +12D. lens 3" before the eye, so that the light passes through the lens and pupil to the retina and choroid, from where it is reflected on the same way into your eye, giving you an inverted image of the objects in the fundus. The technic of all this is best acquired from an instructor. By this method you receive a smaller image, but you overlook a much greater part of the background than with the direct method (erect image). You move your head from one side to the other and let the patient look about so that you obtain a perfect survey of the eye, and can, in most cases, make a satisfactory diagnosis of the condition of the background.

If there are parts which you do not see large enough, you have to examine the eye with the *direct method* (erect image). For that you turn the Rekoss disc in such a way as to have the empty hole behind the sight-hole, place the patient two feet before the light and look into his right eye with your right, into his left eye with your left, as close to his cornea as 13 mm. if possible. In this position the visual line of the patient, your own visual line, and the pencil of light passing from the lamp into your eye are sufficiently in the same direction to cause no distortion of the fundus-picture. This position, upon which Helmholtz dwells, allows you to dis-

pense with the tilted mirror. I have often made control examinations with a tilted and with a fixed mirror, and have arrived at the same result with regard to the optical condition and the shape of the objects in the background. If, as it is customary, the patient is placed sideways of the light, then the rays passing through strong lenses behind a fixed mirror cause sufficient distortion to vitiate the result of the examination. It is advisable for beginners, and also with narrow pupils or dull media, to have the pupil dilated, best with a drop or two of a 5 per cent. solution of euphthalmin, or with $\frac{1}{4}$ per cent. or $\frac{1}{2}$ per cent. solution of homatropin.

So much, gentlemen, I would ask your indulgence for a plea to use a simple ophthalmoscope. The complicated instruments mostly do not indemnify us for the loss of time required in their use. An excellent teacher (Robert Koch) advised me in the outfit of the microscope to have only three lenses, one with 30 to 50, another with 300 magnifying power, and a third an oil immersion of $\frac{1}{12}$; "the others are useless." With regard to the two methods of ophthalmoscopic examination, I frequently see young oculists who come to my clinic use first and only the direct method and pass an inordinate time in looking into the patient's eye without finding what I direct their attention to. When I ask them why they did not examine the patient in the indirect method, they answer that they had been taught the direct only, and had been told the indirect was superfluous. As this has also been expressed in some of our modern text-books, I should like to know whether this opinion is prevailing. I, from my experience, would regret if the method of examination in the inverted image were to be neglected, for I find it indispensable.

"A certain profession of dogmatism," says a great surgeon in an address to medical students, "is essential in the treatment of the sick. The sick man will allow of no hesitancy in the recognition of disease. He blindly demands that the appearance of knowledge shall be absolute, however shadowy and unsubstantial may be the bases of it." But is this good advice? It is, so far as the patient is concerned, usually true at the time of illness, but there are several other considerations which we believe make the advice to the physician the reverse of wise. In the first place there are the patient's relatives and friends. Even in hospital practice and in private practice among the poor it is not true that the physician succeeds in humbugging the friends by an assumed dogmatism without the reality of knowledge and conviction. Among intelligent laymen, far more frequently than is supposed, one will find that any such sham certainty is at once detected. Doctors make a great mistake when they think their deceits really deceive. Then there is the patient who recovers. When he is well the false diagnoses, the changes of dogmatic opinion and medicines, the blind alley of proved errors—these are thought over, and the doctor is scorned, not loved. This is, in fact, the origin of the famous saw concerning the wish of the devil to become a monk when he was sick, etc. Thirdly, comes the reaction on the dogmatist's character. One can not dishonestly assume knowledge, and skill, and prophecy without at last fooling himself, and he then enters upon a life of continually descending tactlessness in which the fraud becomes proportionately more evident to others as it becomes more unconscious to self. The profession suffers also, because to it is charged the sin of the tricky doctor. Slyness, assumed virtues and knowledge, cunning—these do, in fact, prevent true professional success. But the foolish sly ones will never find it out.—*American Medicine*.

No Ice-Cold Drinks in Berlin.—The municipal authorities of Berlin, with a fatherly solicitude for the stomachs of the burghers intrusted to their guidance, have issued a decree that no iced drinks shall be sold in any place of public refreshment in that city. The limit of frigidity allowed is 10 C., or 50 F.—*Medical Record*.

ASSOCIATED MOVEMENTS OF HEAD AND EYES.*

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In order that the body may properly perform its functions and all the organs act in harmony, a certain reciprocity must be maintained between the different parts. Nowhere is this reciprocity, this association of action, better observed than in the movements of the head and eyes. Upon account of the protected position of the eyes and the direction of the plane of the orbit in the human skull, the field of sight is restricted much more in man than in some of the lower animals where the eyes are much more mobile, and were it not for the increase in the range of the field of sight which the rotation of the head affords, man would be unable to perceive many side objects without change of position of the entire body. Not only does the head, however, by its movements, augment the range of the field of vision, but it also supplements the action of the extra-ocular muscles in the delicate task of maintaining proper visual axes. To properly perform this two-fold task the head is provided with numerous and intricately acting muscles, and it is only when we remember that there is scarcely a position assumed by either the eyes or head in which the action of both parts do not enter, that we realize how intimate the relationship between the extra-ocular and cervical muscles is; indeed, it might be added the musculature of the entire body as well, for it is usual for the muscles of the trunk to be implicated in a greater or less degree in all vicarious positions of the head.

It is not the intention of the writer to approach the subject of these associated and vicarious movements from an anatomic or a physiologic standpoint, but rather to record some clinical observations which he has recently had an opportunity of making on several subjects who presented such movements. To facilitate this study the movements of the head and eyes which may occur in association have been classified into four groups:

1. MOVEMENTS WHICH ARE PHYSIOLOGIC.

Under the class of physiologic movements are included the many and varied movements which the head makes through the medium of the neck muscles in supplementing and augmenting the action of the extra-ocular muscles. Such movements are often involuntary and are almost constant; and though their mechanism is complicated and intricate by reason of the close association in the cerebral innervation of both extra-ocular and cervical muscles, both sets are enabled to act in perfect unison.

2. ABNORMAL INDEPENDENT BUT SIMULTANEOUS MOVEMENTS.

Movements which are abnormal and though simultaneous and having the same pathologic origin are not related in the sense of being dependent on one another, constitute the second class. Under this is included the accidentally simultaneous occurrence of nystagmus and head tremor in certain diseases of the cerebrospinal system, as, for example, in disseminated sclerosis and in paralysis agitans. As is well known, nystagmus is one of the characteristic symptoms of disseminated sclerosis, while head tremor is a comparatively unusual manifestation; yet both the movements in the eyes and the tremor

in the head may occur in the same subject at the same time, without either being responsible for the other, the associated conditions being due to sclerotic foci in the vicinity of the nuclei of both sets of muscles. In paralysis agitans the head not infrequently presents conspicuous tremor in consequence of contractions in the superficial and deep cervical muscles, but the muscles of the eye are but rarely affected. Debove, however, has noted in rare cases a retardation in the movements of the eyes which, if the patient was reading, occasioned a characteristic pause at the end of each line, and Galozowski also has observed imperfect movements of both eyes and head in this disease.

3. COMPENSATORY MOVEMENTS.

The third class is a vicarious position of the head. Assumed to compensate for some imperfect action of one or more of the extra-ocular muscles. On account of the close physiologic association between the extra-ocular, the cervical and some of the trunk muscles, in the event of the failure of one of the eye muscles to properly perform its function, this latter may be assumed by some of the muscles of the other groups, but always at the expense of the proper head posture, for a deviation in one set of muscles can only be compensated for by a secondary deviation elsewhere. This act of compensation is well seen in paralysis of an eye muscle, where it is a known law that to avoid the diplopia and visual vertigo which such a palsy occasions, the head is turned in the direction of the affected muscle, thereby supplementing its action, so that for every variety of palsy there is a characteristic pose of the head. A similar deviation, though to a less extent, may be observed in cases of imbalance of the extra-ocular muscles which are latent, the so-called phorias.

An extremely interesting class of cases which the writer would include in this group, as an example of compensatory head movements, is the wry neck, which has been observed in a few cases after palsy of one of the muscles controlling the vertical movements of the eyes. Though this condition was first described by Caignet in 1873, this writer did not place quite the true interpretation on his observations, as he considered the ocular condition to be one of strabismus in association with hypermetropia, and credit should be given Wadsworth for first attributing torticollis to a paralysis of one of the eye muscles. The report of a case of this nature by this author may be found in the transactions of the American Ophthalmological Society for 1887, as well as brief mention by Risley of two cases of a similar character which had occurred in his practice. Since then five other cases have been recorded, all of which presented much the same features: paralysis of one of the vertical eye muscles and an obliquity of the head occasioned by spasm of the sterno-cleido-mastoid muscle.

Of the six reported cases (those by Risley are excepted on account of insufficient data) Nieden summarizes that the torticollis followed a paralysis of the superior oblique of the left eye, with obliquity of the head caused by traction of the muscles of the right side in three cases; in two the same muscle traction followed palsy of the right inferior rectus muscle, and in his case alone paralysis of the superior rectus of the left eye caused a contraction of the sterno-cleido-mastoid muscle of the same side. Graefe, however, questions the accuracy of Nieden's diagnosis, and states that the palsy in Nieden's case could not have been of the left superior rectus, but, rather of one of the muscles which pulled the right eye downward, i. e., the right superior oblique.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee. Report. H. V. Würdemann and J. A. Frank.

To these cases of torticollis of ocular origin the writer desires to add another.

CASE 1.—L. D., aged 9, was sent to the writer in May, 1900, by Dr. Alfred Hand, Jr., with the following note: "L. D. was a patient of mine in his infancy. Even at that early date I noticed a wry neck and once in holding the head straight, for the muscle was not permanently contracted, I saw a downward deviation of his right eye, which I thought might be the cause of his holding his head to one side. The case passed from under my care for several years, but seeing him again and finding the same conditions still present, I am referring him to you for an ocular examination."

On questioning the mother, it was elicited that a few days after birth the attending physician noticed a peculiar winking of the right eye and that shortly after this it was remarked that the head was drawn toward the right shoulder. Labor had not been unduly prolonged and forceps were not applied. The peculiar appearance in the right eye soon took the form of a distinct "cast," and the head was held constantly crooked. The muscles of the neck were never rigid but the head could always be straightened without difficulty. Recognizing the importance of early treatment, the child was taken to the Jefferson and later to the University Hospital, and notwithstanding that the general condition, which was somewhat impaired by rickets, improved under general medication, the wry neck did not respond either to the systemic treatment or the local application of electricity. When 22 months old, the child developed a retropharyngeal abscess, for which he was successfully treated by Dr. Hand.¹ Between the ages of 4 and 6 years, the child had frequent attacks of dizziness and on several occasions received severe falls from stumbling. Neither the mother nor the child remember his ever having seen double. When six years old he was given glasses, with marked relief to the dizziness and stumbling but without effecting any change in the axis in which he held his head. The writer first saw the child when he was 7 years old, and noted at that time the following condition: Child is apparently well nourished, but persists in drooping his head upon the right shoulder while the face is turned toward the left, the position being that which is occasioned by contraction of the right sterno-cleido-mastoid muscle. With the head in this deflected position the eyes are apparently on a level, but when the head is straightened, which can be done without difficulty, owing to the ready relaxation of the muscle, it is at once remarked that the visual axis of the right eye is turned down and that the patient fixes with his left eye. Vision and accommodation were normal in both eyes, the pupils were of equal size and responded well to light and accommodation stimuli. On account of there being crossed diplopia in the upper field, and the image of the right eye being higher, as well as the restriction of the movement in the right eye upward, and especially up and in, it was thought that the superior rectus muscle in the right eye was the muscle at fault. An operation to bring the visual axes of both eyes on the same level being refused the hypertropia was partially corrected by means of vertical prisms, but though these lenses have been persistently worn during the past two years, they have exerted no apparent influence upon the position of the head, owing partly to the fact that the prisms were inadequate to correct sufficient of the hypertropia to establish binocular vision and partly also to the fact that the deviation in the head had been of such long standing that secondary deflection had occurred in the spine, which tended to fix the deformity.

The accompanying photograph (Fig. 1) illustrates the position of the head and shows the left eye fixing while the right is deviated on a lower level.

4. RELATED BUT NOT COMPENSATORY MOVEMENTS.

The last class includes movements of the head and eyes which are abnormal and bear a direct relationship to one another without being compensatory. Cases of this class are those in which the anomalous movements

of both head and eyes are probably the result of a central lesion. The most familiar instance of this class is the simultaneous movements in head and eyes which occur in conjugate deviations after the involvement of certain portions of the brain, as, for example, cases of brain abscess, and not infrequently during the attacks in parietic dementia.

Another type of this class is the cases of head jerking associated with nystagmus which occur in young children—cases of so-called spasmodic nystagmus. In this disease the child moves its head rapidly, either from side to side or up and down—or at times with associated horizontal and vertical movements, while the eyes make rapid nystagmic movements. The direction of the head movements and those of the eyes may correspond, but this is not invariable, as the nystagmus may assume all forms and may be limited to one eye. Though, as a rule, synchronous movements of the globe are much more rapid than those of the head, at times the movements of the head and eyes are independent of one another. The nys-



Fig. 1—Torticollis due to hypertropia.

tagmus is aggravated by holding the head quiet and by making the eyes fix. In addition to the jerking movements, the head is not infrequently turned to one side or thrown back, probably in compensation for a faulty-acting eye muscle. for in addition to the nystagmus marked deviation in the visual axes, with strabismus, has been noticed in a large number of cases.

The absence of any pathologic changes which has been noticed in the few cases which have come to autopsy and the invariable tendency which these cases have to recover, has led Haddon to the assertion that the head and eye movements in this class of cases are due to an "instability of the motor centers above the nuclei, in the spinal cord and fourth ventricle, presumably the cerebral cortex."

It has been observed, however, chiefly by Randnitz and Caillé, that if the eyes are bandaged the motions of the head cease. Randnitz noticed also that the head movements were most influenced by the direction of the visual axes, that they ceased when the eyes were deviated

in certain directions and started up again as soon as they were rotated from this position.

Though there is ground from Randnitz's experiments that the head motion may be compensatory to an initial eye lesion, the nature of the affection is still in doubt, and it is probable that the ganglion cells which innervate the muscles of both head and neck are simultaneously affected by an exhaustion or irritation process. Rachitis and other nutrimental disturbances are common in this class of cases, and occurring as they do at the age when the association between head and eye movements is being perfected, probably act as the predisposing cause.

Under this class would fall also the wagging of the head which occasionally accompanies the eye movements in miner's nystagmus, both the head and eye movements being due to motor exhaustion of the cortical centers which govern the muscles of the head and eyes respectively. The writer desires to report under this class a case which is not very dissimilar from those of spasmus nictans.

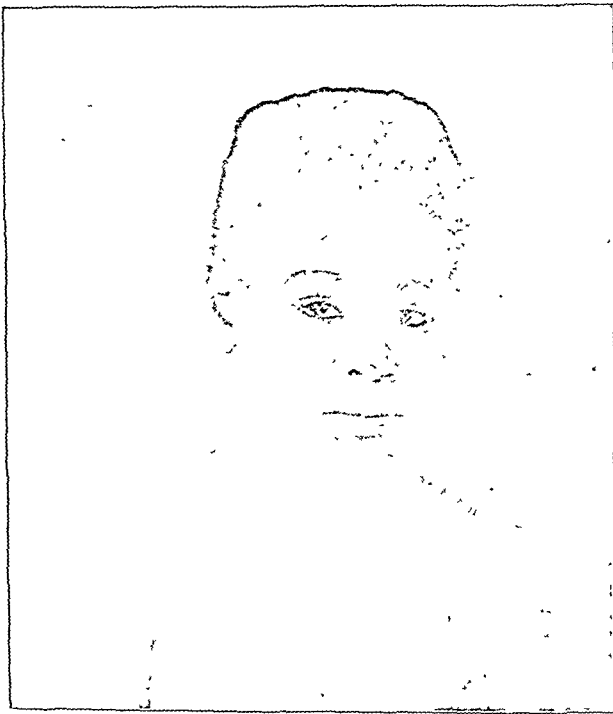


FIG. 1.—Synchronous movements of head and eyes

CASE 2.—In June last a colored child, aged 8, consulted him at the Polyclinic Hospital. The following history was obtained: The child had always been healthy, but when it was about 5 years of age the mother noticed that its head moved from side to side, especially when regarding near objects, and queer movements were remarked in the eyes also. These movements were quite constant, were never very rapid or violent and ceased when the child was told to control them. Glasses had been prescribed, without exercising any apparent effect upon the movements of either head or eyes. At the examination it was noted that when the child walks about or when her attention is not attracted, the head is turned toward the left and slightly down, and very perceptibly rotated from side to side. These movements are regular and rhythmical and quite under the control of the will.

Inspection of the eyes reveals that they are in motion also and that there is a convergent strabismus of pronounced degree in the left eye. In contradistinction to the movements of the head, those of the eyeballs are vertical and slightly rotary, this being the more pronounced in the left eye. The nystagmic movements of the eyes are more frequent than

those of the head in the relationship of five movements of the eyeball to two of the head. The head and ocular deviations are well shown in the accompanying photograph (Fig. 2).

With the exception of a high degree of far-sighted astigmatism, both fundi were normal and vision could be brought to 5/7½ in each eye by the proper lenses. Notwithstanding this degree of visual acuity in both eyes, it was impossible to elicit double images, so that it could not be definitely ascertained which muscle or muscles of the left eye were at fault. As, however, the position of rest of the eye was constantly one of convergence, and as the upper and outer movements of the globe seemed to be most restricted, it was thought that the ocular condition could best be explained by a palsy of the inferior oblique muscle of the left eye, with perhaps a paretic condition of the superior and external rectus muscles.

The child was well-nourished and strong, playful and happy and gave no evidences of rachitis. There were three other children in the family, all of whom were healthy and none exhibited abnormal head or eye movements. With a view of determining the existence of any other nervous manifestations, the case was sent to the nervous department for examination. Dr. William G. Spiller, the professor in charge, reported as follows:

"The little girl, M. G., has no important symptoms other than the lateral movement of the head and the vertical nystagmus. I noticed that she shakes her head slightly from side to side at times, and that there is a tendency for the chin, more than the whole left side of the face, to be turned toward the left; a position that would be produced by the action of the right sterno-cleido-mastoid muscle. I have thought it possible that the vertical nystagmus—which seemed to me to be only in the left eye—might be the result of weakness in the ocular muscles to which you refer; and that the lateral movement of the head might have a similar cause, viz., slight weakness of the left sterno-cleido-mastoid muscle. I could not obtain any history of birth injury to this muscle, or of any subsequent injury, but it seems at least possible that if the left spinal accessory nerve were weak the sterno-cleido-mastoid muscle might be innervated incoordinately, and that in this way a lateral regular movement of the head might be established. This is offered merely as a possible explanation of the case. The knee-jerk is normal on each side. Sensation is normal and there are no hypersensitive zones."

THE PRESENT ASPECT OF THE TUBERCULOSIS PROBLEM IN THE UNITED STATES.

S. A. KNOPF, M.D.

NEW YORK CITY.

(Concluded from p. 131.)

After this general comment I will take up some of the states individually. Dr. William Duffield, Phoenix, Ariz., tells me that there is no board of health in the territory. Just think of it! Arizona, the place which is perhaps more sought and visited by consumptive invalids than any other, has no board of health, and consequently no laws nor regulations concerning tuberculosis in man. No circulars nor ordinances are issued. The town of Phoenix has an anti-spitting ordinance, but the law is a dead letter and has never been enforced. There is no sanatorium or special hospital for the exclusive treatment of tuberculosis in Arizona and no society for the prevention of tuberculosis. In his letter to me, Dr. Duffield lays particular stress on the sad fact that there is not a single place in the whole territory where the poor consumptive can receive shelter and treatment, and he also says "thousands of patients are sent here annually, hundreds of whom have but a few dollars when they arrive." But the climax of all this, it seems to me, is reached by the report that "the most stringent and rigid laws to combat bovine tuberculosis with the very best possible execution of the same are

carried out." How little importance seems to be attached in that territory to the danger of the propagation of tuberculosis from man to man and how much from animals!

From the report received from New Haven, Conn., I quote the following: "Twenty-five thousand dollars was appropriated to the Hartford Hospital to establish and conduct an experimental hospital for consumptives." Professor Lindsley very justly adds: "What the experiment is to be I do not know." It seems to me that the \$25,000 appropriated for the treatment of consumptives according to the already known methods which have proved so efficient would certainly accomplish a great deal more than this experimental hospital.

Another interesting point in connection with Connecticut legislation seems to be revealed in the following report, which says: "We had some laws to combat bovine tuberculosis, but they have been repealed." In connection with this state I must mention yet the report which came to me from Mr. Ward Bailey, clerk of the New Haven City Board of Health. On the inquiry whether there existed any circulars of instruction he said that he thought there were none. Yet the State Health Department of Connecticut which has its office in the same city from which Mr. Bailey sent me the report, has issued a most admirable circular, entitled "Consumption, Its Cause and Means of Prevention." The lesson which we learn from such a situation is evident, namely, that it does not suffice for a board of health to issue circulars, but it must also see that these circulars are widely distributed, and that at least all the employes of the health departments in the same state should know of their existence and be familiar with their contents. My question, "Is there any private or public institution for the exclusive treatment of consumption in your state or near your city?" which was addressed to the state as well as to the city board of health, was answered in the negative by both departments, yet there has existed for over a year in New Canaan, Conn., a private sanatorium for the exclusive treatment of consumption, of which Dr. M. J. Brooks is the physician in chief. Now I may be asked why should boards of health officers be expected to know of private institutions which treat consumptives? My answer is, they should know of all such institutions and should supervise them; leaving aside the value of the information which should be necessary for statistical or sanitary reasons, no hospital for communicable diseases should exist in any state without the knowledge of the board of health. The same criticism I must make in regard to the report I received from the State Board of Health of North Carolina. On the question, "What private or public sanatoria for the exclusive treatment of consumptives exist in your state?" I received the answer, "None." There are no less than three institutions in North Carolina, their existence having been reported by Dr. Ambler¹ of Asheville.

From the Health Department of the District of Columbia I received the following reply: "A letter is sent to such physicians from whom a death certificate has been received, giving the cause of death as tuberculosis, recommending the disinfection of the premises." This is doubtlessly a good recommendation, but I venture to say that if the recommendation would be extended so as to read: "The disinfection of the premises inhabited by a consumptive person is not only urgently recommended after death or removal, but also at regular intervals during the lifetime of the invalid," it would be

far more effective. The same suggestion I venture for Toledo, Ohio, where the report reads: "We are fumigating all houses of tuberculous people after death has occurred."

The secretary of the State Board of Health of Illinois did not know of the existence of the Illinois Society for the Prevention of Tuberculosis. Such a society should not only be known to the State Board of Health, but should be in permanent communication with it.

In contrast to this state of affairs I was pleased to learn that the secretary of the State Board of Health of Maine, Dr. A. G. Young, is at the same time the secretary of the State Sanatorium Association, and the Governor of the state is president.

From the state of Michigan, where such excellent work is done in general sanitation and in regard to the spread of tuberculosis from man to man, it is surprising to hear the following report, kindly sent to me by Dr. Baker: "If a case of tuberculosis in an animal is reported to the State Live Stock Commission, that commission is not legally bound to take action for the protection of the human species, but only to restrict the spread of the disease among animals." The destruction of tuberculous food products to prevent them from being consumed by men seems thus not to enter the province of the Live Stock Sanitary Commission.

From Missouri, thanks to the courtesy of the secretary of the State Board of Health, I learn that there is a special institution for the treatment of tuberculous insane, but nothing whatsoever is done for the sane tuberculous patients.

The Territorial Board of Health of New Mexico has a school law which makes it a prerequisite for all teachers of the public schools to furnish a physician's certificate that they are not afflicted with tuberculosis. The City Board of Health of San Francisco goes a little further and makes not only the same prerequisite to employment of teachers, but has also a provision to dismiss teachers who become afflicted with tuberculosis. The inefficiency as well as the injustice of such a law must be evident. A law which does not provide for the regular and periodical examination of school teachers can not possibly be effective in protecting a school from the presence of a consumptive teacher. So much for the deficiency of the law, but what about its justice? Is it right and just that school teachers who are discrete and intelligent and presumably educated in the simple means in preventing the spread of disease, are excluded from the public schools and the pursuance of their vocation, while any number of children who may be tuberculous are permitted to attend school, and, owing to their ignorance, infect their little comrades and perhaps the school teacher as well? I am not in favor of allowing consumptive teachers to pursue their vocation, for I believe their chances for cure are greatly diminished by the deficiency of good and pure air, characteristic of school rooms, but I honestly believe there is more danger from the spread of tuberculosis from child to child than from teacher to the children.

In Rhode Island the only circulars issued are those sent out with the bottles which are intended for the collection of sputum and those circulars which are returned with the positive report. In other words, there must be a demand for the examination of sputum before the board of health issues circulars of information. It would seem to me that the public should be informed a little earlier concerning the danger from infectious sputum. Dr. Swarts, the secretary of the State Board

1. "Public Sanitaria." THE JOURNAL A. M. A., Jan. 18, 1902.

of Health, very kindly called my attention also to a defect in Rhode Island's bovine laws. I gave the detailed report in its place, and here will only call attention to the fact that the farmer is not compelled to submit his cows to the tuberculin test until he wishes to, consequently he may utilize the animals for milk production until the last stages of the disease, and when they fail to give milk he can sell the diseased carcass to the state for half of its appraised value.

The State Board of Health of Tennessee has adopted resolutions concerning tuberculosis, anthrax and glanders in animals. They read as follows:

Resolved, That this board hereby gives notice that all persons are prohibited from selling milk, or other dairy products intended for human food, from cattle infected with either tuberculosis, anthrax (charbon) or glanders.

All persons are prohibited from skinning, selling, or otherwise making use of any part of any animal dead from anthrax (charbon) or glanders, and from throwing such dead animal into any pond, lake or running stream.

These resolutions are deficient in two points: First, they do not cover the danger which may arise from feeding animals with tuberculous products; for example, when calves or swine are fed with tuberculous milk or other tuberculous dairy products. Again, the second portion of the resolution does not include tuberculosis, and anyone may do with a dead tuberculous animal what he pleases.

The state of Texas distinguishes itself by an admirable enterprise. It has an agricultural colony for tuberculous prisoners. The result has been surprising. A large number of prisoners have been cured, and during the first year \$25,000 remained as net earnings of this philanthropic enterprise. There is no other state or private institution taking care of consumptives in the large state of Texas, the tuberculous prisoners alone are well provided for. This should give us much food for thought as to what to do with our consumptive poor in the earlier stages of the disease who are not criminals. A similar situation exists in Minnesota, where there is a special hospital for tuberculous prisoners.

The most striking and bold items of the many circulars I have studied are in the one issued by the young Washington State Board of Health. Here are a few of them:

RULES FOR THOSE WHO WOULD AVOID CONTRACTING THE DISEASE.

Summer and winter, women must wear skirts that clear the sidewalk. Avoid all kinds of fur or other soft trimmings around the lower border of dresses. Americans are expectorating animals. Note the filth, especially the spit on the sidewalks. Skirts drag through this, are taken home, dried, brushed and cleaned, and thus disease germs are introduced into the household.

Never put coin or other money into the mouth.

Do not forget that every case of consumption comes from some person or animal that has consumption. Do not spit in the cars, churches, theaters, sidewalks or other public places. If you do, the consumptive will do the same, and thus spread the disease.

As far as I could learn from the careful perusal of all the reports Boston is the only city which makes removal of a consumptive to a hospital compulsory in case proper care and isolation can not be procured for him at home.

From Pittsburg, Pa., we learn an important lesson in the need of combined action of state and city boards in the prevention of bovine tuberculosis. Dr. Matson very kindly writes me in this regard: "There are no measures, laws or regulations to combat bovine tuberculosis in our city, except what indirectly results from inspection of dairies within the city limits. This has had some

effect in driving the dairies outside, where they have been beyond our control until very recently."

From so large a city as New Orleans I received a negative reply to all my questions. The very amiable secretary, Dr. Sidney Theard, expressed his regret that tuberculosis has not received in his city the consideration it deserves. He mentions that a committee has been appointed to establish a state sanatorium, and he adds: "there the matter rests; doubtless the truth of science will eventually prevail." This shows that the fault does not always rest with the boards of health, but rather with the powers behind the throne.

While it is now universally recognized that the main source of the propagation of tuberculosis comes from man and the infection from beast next, the commissioner of health of Minneapolis writes: "All laws and regulations in effect in this city for the purpose of combating the spread of tuberculosis are confined to a rigid inspection of the cattle from which we get our milk supply. Every herd is tested once each year, and cattle found to be infected are condemned and killed."

To judge from the letter sent to me from the health officer of Louisville, Ky., he, like Mr Bailey from the New Haven city board, is not aware of the existence of an excellent circular issued by the State Board of Health in regard to the prevention of consumption.

RECOMMENDATIONS BY THE AUTHOR.

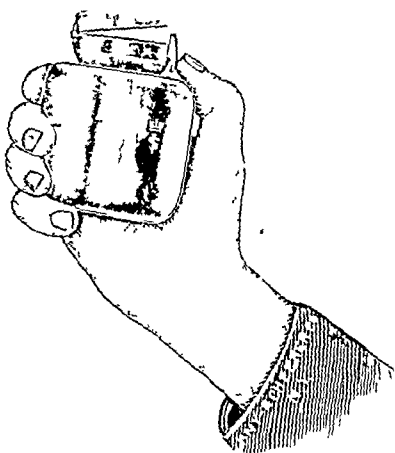
In presenting to you this report permit me in conclusion to suggest a few thoughts which have come to me during what I believe to be a careful study of the situation as it presents itself at this moment. There is no gainsaying that, compared with the situation of five years ago, we have made good progress in our anti-tuberculosis crusade. While a few states and cities have remained stationary, and some have even retrogressed, of the majority I can report progress. Anti-spitting ordinances have multiplied, thus showing that most health authorities consider indiscriminate expectoration the greatest source of infection. I heartily agree with this view, but I wish that our sanitary authorities would go a little further and not only prohibit expectorating in certain places, but also provide receptacles so that those who must expectorate may have an opportunity of doing so without offending others or doing harm. There are many ways of providing expectorating facilities, and I would not wish to be dogmatic in this respect. The ideal would, of course, be for everybody who is tuberculous, who has a chronic nasal or bronchial catarrh, grip, or is recovering from measles or pneumonia, or who chews tobacco, to use as a receptacle a pocket flask which would be unbreakable and could be used without attracting attention.

A CONVENIENT POCKET FLASK.

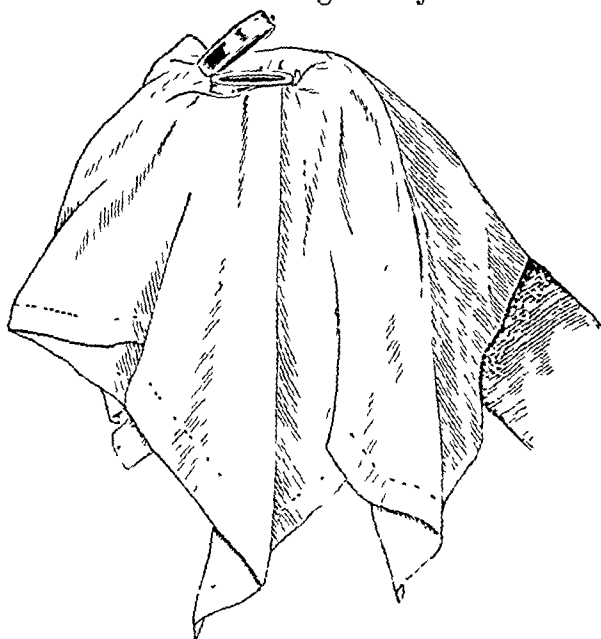
I take pleasure in showing you here a little model which, perhaps, answers all the requirements. As you see it is oval in shape and can be conveniently placed in a pocket. It is about $3\frac{3}{4}$ inches in height, its longest diameter is $2\frac{3}{4}$ inches, and its shortest diameter $1\frac{1}{2}$ inches. The opening is round and has a diameter of $1\frac{1}{2}$ inches. A movable funnel prevents the contents from soiling the cover, acting on the principle of the reversible inkstand. The flask is made of spring brass and is electro-nickel plated. Two seamless brass cups are welded together, forming the flask, to which the cover is firmly soldered and the funnel spun (seamless) with a flange fits exactly on the rim of the cup. The cover is closely fitted with an elastic rubber ring for the purpose of preventing leakage. There is a strong spring

catch which serves for opening and closing, and the flask can be manipulated with one hand by pressing

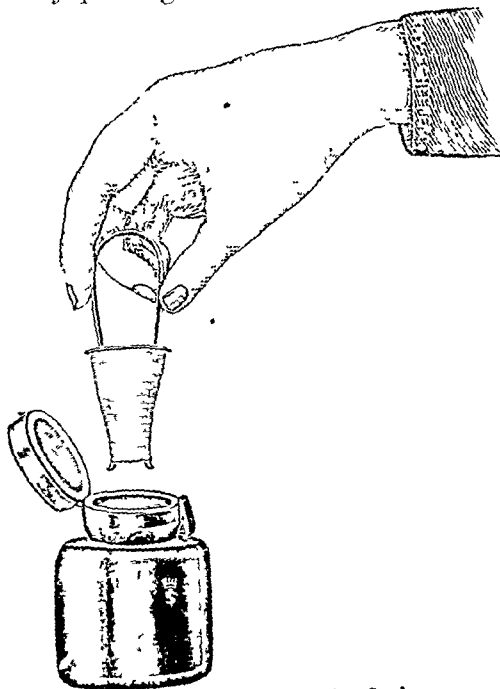
flask outside of the handkerchief the cuspidor can be used without attracting any attention.



Nickel-plated, oval shaped pocket flask. Manageable with one hand, with the thumb against the opening spring and closing the cover with the index finger. By the aid of a wire

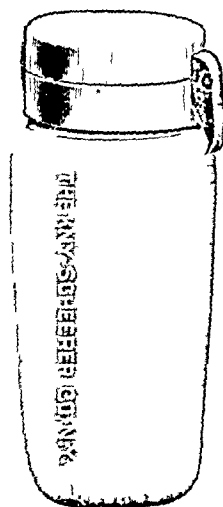


The same, hidden in the folds of a handkerchief hook the funnel can easily be removed and the flask emptied. By placing the flask in the center of a mod-

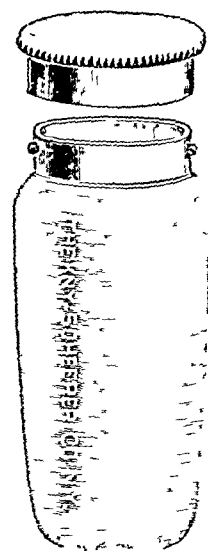


Method of emptying the flask.

erate sized handkerchief, taking up the four corners and putting an elastic band around the neck of the

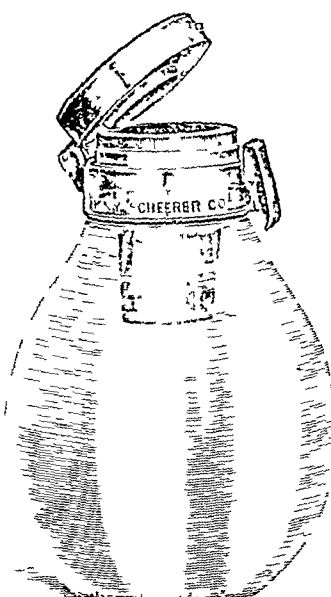


Round-shaped, nickel-plated pocket flask. Manageable with one hand.

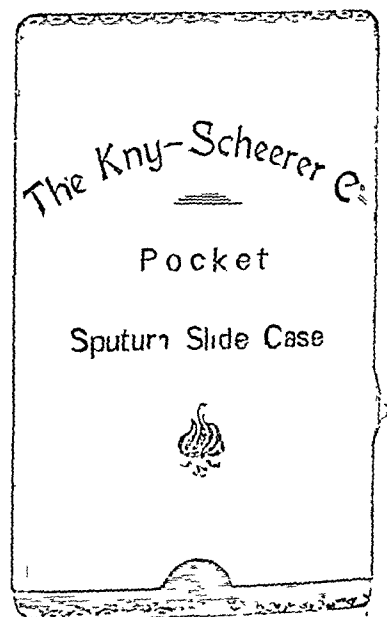


Cheap metal flask with bayonet closure.

I also show you here a few other less expensive paper spit cups and pocket flasks which may well answer the purpose of distribution among the consumptive poor in dispensaries and special hospitals.

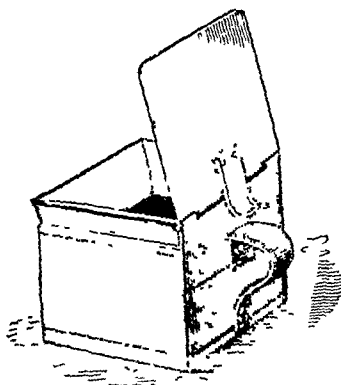


Blue glass sputum flask. Manageable with one hand.

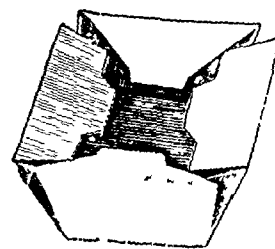


Pasteboard sputum case, resembling cigar case

For the use in public institutions, in corridors and grounds I would recommend an elevated spittoon which has numerous advantages over the ordi-



Frame for Seabury & Johnson's spittoon cup.



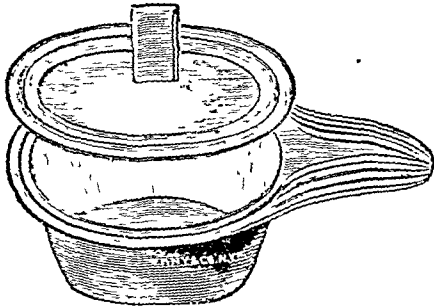
Pasteboard cup for Seabury & Johnson's frame.

nary spittoon placed on the floor. The latter is unsightly, may be tipped over, and usually presents on its

rim or on the outside dried sputum which did not reach the receptacle proper. Having no cover these old-fashioned cuspidors allow animals and insects to get at the contents and thus help in the dissemination of the bacilli.

The stand of the elevated spittoon is 3½ feet in height and consists of iron tubing with a bottom plate which can be screwed on to the floor or fastened to a sunken board when used out of doors. The large cast-iron base, however, is in itself sufficiently heavy to prevent the spittoon from tipping over. On top of this

inches in height, supported by heavy tubing; the receptacle is made of heavy copper coated with pure tin on the inside, to the upper edge of which is screwed a perforated lead pipe which supplies the water for constant flushing. The receptacle is 9 inches in diameter, 5 inches deep, with a funnel-shaped bottom 3 inches deep, fitting into a 2-inch iron cylinder support, which also serves as a connection sewer, and this support is attached to a heavy cast-iron base. The lead-pipe water supply passes along the inside of the apparatus and can be attached to any hydrant.

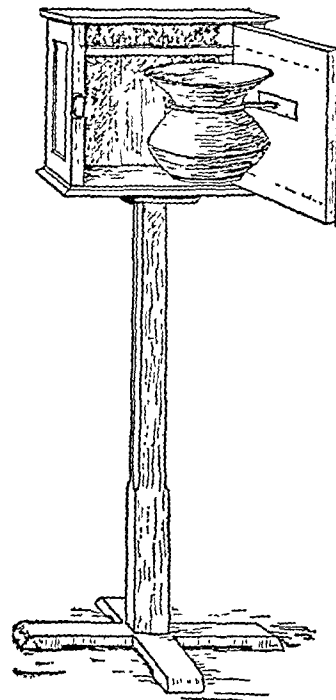


Pasteboard sputum cup for bedside

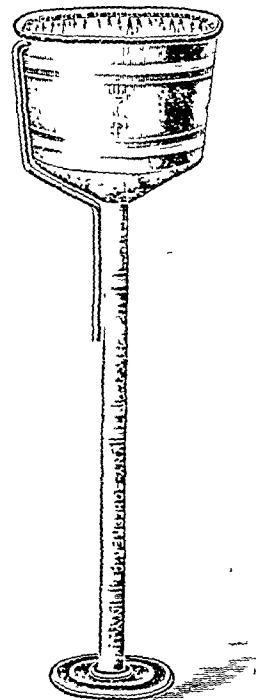


Metal spit cup for bedside

tube is a round box of sheet iron, with a door which can be tightly closed. Attached to this door is a ring in which rests a blue or white enameled iron spittoon. Thus, when the box is opened the spittoon is drawn forward and ready for use. The top of the stand is provided with a rim to facilitate the placing of a flowerpot or other ornament. These elevated spittoons, only visible when in use, by their convenient height and easy manipulation make the deposit of the sputum into the cuspidor more certain than in the case where spittoons are placed on the floor.



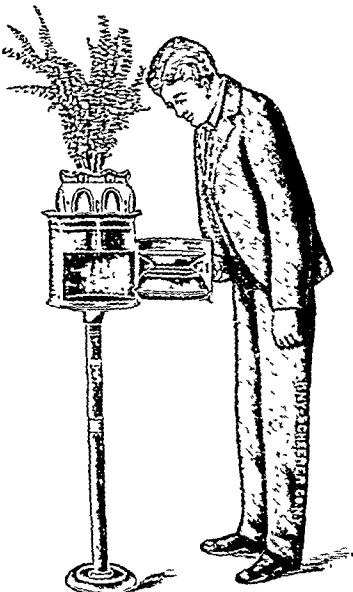
Elevated spittoon, stand of wood—open.



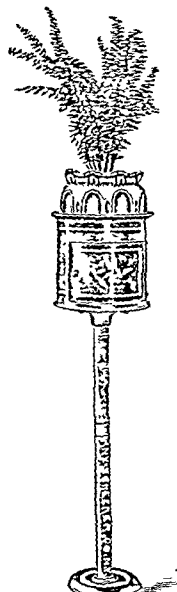
Elevated self-cleansing street spittoon.

A UNITED STATES BOARD OF HEALTH.

Concerning the circulars of information, you have observed what a variety of views are expressed, and you will all agree with me that it would be a splendid thing if a committee with some authority, comprised of the leading sanitarians of the country, could come together and formulate such circulars of information. With



Elevated spittoon, entirely of metal—when in use.

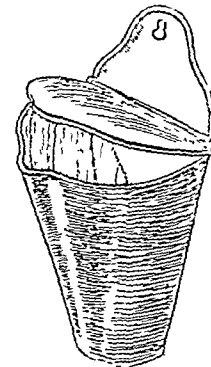


The same, closed.

A similar elevated spittoon stand can be made of wood, which would make it considerably cheaper. (See figure.)

Proedohl's enameled iron spittoon can also be suspended at any height, and is particularly suitable for use in workshops and factories.

For street use, particularly in health resorts, I have devised the following receptacle, which might deserve the name, "public self-cleansing spittoon." It is 39



Proedohl's enameled iron spittoon, to be suspended at convenient height.

the vast difference in the variety and the deficiency of the laws concerning the combat of tuberculosis in man as well as in beast you are likewise familiar, and the only remedy I know of is a ministry of health in Washington—a United States Board of Health—to be in constant touch with all the states and city boards of health in the Union, with universal and effective laws

to combat tuberculosis in man and beast throughout the Union.

THE CONDITIONS IN CUBA.

How much good and effectual work our federal government can do in the combat of any disease has been shown in Havana. I shall not speak here of the simply marvelous way in which Governor-General Wood, whom we may justly call our own, since he belongs to the medical profession, has freed Havana from yellow fever; but I shall only report here the replies which have been received in answer to my inquiries concerning the work on tuberculosis. There is a military order directing that all cases of tuberculosis must be reported to the sanitary department under the classification of contagious diseases. Ten stations have been established in the different districts of the city for the collection of sputa, etc., sent by physicians. These are collected daily at 8 a. m. and forwarded to the bacteriologic department, a notification being returned to the physician, stating the result of the examination, and a record of the case is kept on file. If the patient is in a grave condition and is unable to be provided with the proper medical care, he is sent to the Municipal Hospital, where there are special pavilions, exclusively for incurable cases of tuberculosis. If the case is of a mild type, it is sent (provided there is room) to the Arroyo Apollo Sanatorium, which is now being established for the city poor for incipient cases. There are excellent circulars, tracts, orders, etc., relating to tuberculosis, issued by the sanitary department in Spanish and English.

There is a special pavilion on Pirotecnia Hill for the municipal poor, to which only bedridden cases of tuberculosis are admitted. There is also a sanatorium at Arroyo Apollo, ideally situated on high ground, about seven miles outside of the city of Havana, in the center of a farm of about fifty acres. These were established by the sanitary department. To the latter are admitted only incipient cases that have been previously examined by a special board of physicians. Besides these institutions there is the "Dispensario Especial de la Sanidad" (Special Dispensary of Health), with hours for consultation from 1 to 3 daily. Children and women, Mondays, Tuesdays and Fridays; men, Wednesdays, Thursdays and Saturdays. For employes in factories, unable to attend in the daytime, clinics are held Friday evenings from 8 to 10. This dispensary, which treats diseases of the chest exclusively, was also established by the sanitary department and is under its direct control.

There exists an Anti-tuberculosis League of Havana. The chief sanitary officer, Major Gorgas, and Dr. C. L. Furbush, acting chief sanitary officer, have been appointed by the society as honorary vice-presidents. The acting officers and members are Cubans. This society has done a noble work, and too much credit can not be bestowed on it.

A special board for bovine tuberculosis and glanders was inaugurated March 6, 1901, and is under the direction of the city government.

As a postscriptum to this admirable report, my friend, Dr. C. L. Furbush, the acting chief sanitary officer, writes me: "In addition to the work outlined, we have a special medical inspector for tenement houses and factories; one for cafes, restaurants, boarding houses and hotels, fondas and laundries; one for houses of prostitution, prisons, jails and the immigrant station; and another for milk and dairy products, markets, slaughter houses and bakeries; an auxiliary visiting board composed of laymen and physicians, who visit

bedridden cases that are unable to be provided for in the hospitals and who object going to the hospitals; to visit at the homes and to lend encouragement, provide medical attendance and improve the comfort and sanitary condition of their surroundings. By the above brief synopsis of the work being done in Havana you can readily see that we are all deeply interested in the question, and none more so than Governor-General Wood and Major Gorgas, the chief sanitary officer, who has covered himself with glory in his marvelous work during the past two years."

Thus you see that even the value of special tuberculosis dispensaries has been recognized immediately by the sanitary government of Cuba, and I regret to say that the importance of such dispensaries in the combat of tuberculosis is not sufficiently estimated in this country. Several of the large centers of population in France and Germany have now most active and well-equipped special tuberculosis dispensaries. Only the other day I read in the *Medical Review of Reviews* (April) that, thanks to the liberality of two French ladies who donated 800,000 francs, Paris will soon have another large municipal dispensary for the exclusive treatment of ambulant tuberculous patients.

THE NEED OF SANATORIA: THE OPPORTUNITY FOR PHILANTHROPY.

The great question of providing hospital and sanatorium accommodation for the thousands of consumptive poor and moderately poor can not be solved without the aid of philanthropists. Societies for the prevention of tuberculosis and sanatorium associations can do much to draw the attention of our public-spirited men to the urgent need of such institutions. But we physicians, family practitioners and specialists must make our influence felt whenever we have occasion, by word of mouth or by pen. What my own views on the duty of our philanthropists are in this respect I have recently made public in a little article, written for laymen and published in the *North American Review* for March. While gladly expressing my profound admiration and gratitude for all that has been done by our Carnegies, our Rockefellers, Vanderbilts, Morgans, Pearsons, our Helen Goulds, Phoebe Hearsts, Jane Stanfords, (Mrs.) Emmons Blaines, in giving us fortunes for universities, colleges and libraries, I think we as physicians may perhaps be permitted to call the attention of our American philanthropists to the great physical needs of the many suffering men and women of this country. There are now, perhaps, plenty of libraries and colleges, and even general hospitals, everywhere; but there is a scarcity of good, model tenement houses, where the average wage earner could enjoy a cheery, pleasant home without paying an exorbitant rent. In these model tenement homes, thoroughly sanitary, well lighted and well ventilated, a temporary sanatorium-treatment-at-home could even be successfully carried out if absolutely necessary, a thing which is an utter impossibility in most of our present tenement houses. There is a scarcity of public baths, which should, for a moderate price, be at the disposal of the people winter and summer, and for some hours in the evening. There is a scarcity of decently kept places of amusement, open all the year, where the laborer and his family may spend a pleasant Sunday afternoon and partake of non-alcoholic drinks. There is a scarcity of children's playgrounds, large and small parks.

There is a scarcity of hospital and sanatorium facilities for thousands of poor consumptives who could be cured if only taken care of in time. Sanatoria for con-

sumptive adults as well as seaside sanatoria for scrofulous and tuberculous children, are a crying and urgent necessity for the majority of our large American cities. Such sanatoria are schools of hygiene and sobriety, besides being institutions for the prevention and cure of tuberculosis. A half dozen sanatoria for the state of New York for example, one or two agricultural colonies for the very incipient consumptives, and a few special dispensaries in the larger centers would render thousands happy and healthy and make them breadwinners and useful citizens. As the conditions are now, the majority of these are doomed to a certain and lingering death; and if they are careless and ignorant of the necessary precautions, they will infect some of their own kin and neighbors. Could I but picture in these pages the dark, dreary rooms of the consumptive of our tenements, as I have seen them so often; could I but describe the sufferings of mind and body of these people, who must suffer and die, not because their disease is incurable, but because there is no place to cure them; could our generous and wealthy fellow-citizens but see for themselves these conditions; instead of more new libraries, universities and colleges, we would soon have better tenements, more playgrounds and parks for children, and an abundance of sanatoria, hospitals and other facilities for the proper treatment of our consumptive poor.

A NATIONAL TUBERCULOSIS COMMISSION.

Could this important Association, composed of well-nigh 30,000 representative American physicians, through a duly appointed committee, persuade the honored President of the United States and his illustrious advisors to create a national tuberculosis commission, such as now exist in several European countries, composed of the best sanitarians and most experienced physicians, who would formulate for us universal anti-tuberculosis laws, what good could not be accomplished! I am firmly convinced that with such an efficient corps of sanitary officers at the head of the various states and city boards of health, and such an array of philanthropists as we have in the United States the prevention as well as the cure of tuberculous disease here could be equally effective, if not more so, than in any European country. What is needed to attain this end is the combined action of a wise government, well-trained physicians, generous philanthropists and an intelligent people.

16 West Ninety-fifth Street.

Vaccination in England.—Since the unfortunate modification of the vaccination laws of England, enacted in 1898, very many children have been exempted from vaccination. The effect of this disastrous piece of legislation is already showing itself in more ways than one. Seventy English life insurance companies have required a renewal of their policies. Thirteen companies absolutely refuse to insure unvaccinated children, fifty-seven companies consider such persons as exposed to an extra risk, and refuse to pay the amount insured if the policyholder dies of smallpox, while only ten companies continue the old form of contract. Many public departments refuse to employ unvaccinated persons. The Duke of Norfolk (postmaster general), as a peer of the realm, voted for the conscience bill, but as a matter of public policy, does not allow unvaccinated persons in the postal service. The same is also true of the heads of the war and navy departments, each of which voted for the conscience bill, but allowed no unvaccinated persons in their branches of public service. The first lord of the treasury has adopted the same measure. In some quarters of the city landlords have turned out tenants who refuse to be vaccinated, and have placed signs on their houses bearing the inscription, "Not for unvaccinated tenants."

THE ARMY HOSPITAL AND SANATORIUM FOR THE TREATMENT OF PULMONARY TUBERCULOSIS, AT FORT BAYARD, NEW MEXICO.*

D. M. APPEL, M.D.
FORT BAYARD, N. M.

In the paper which I had the honor to present to this Section in 1900 I briefly described the establishment of the general hospital for the treatment of pulmonary tuberculosis in the military post of Fort Bayard, located in the dry mountainous region of southern New Mexico at an altitude of 6,040 feet. I then stated that all the buildings of the post, and the water system and sewerage, were very much dilapidated. These are now in good repair, entirely new and modern plumbing has been installed, but as yet no new buildings for the accommodation of patients have been erected. A glass solarium with steel framework (on the paradigm system) which was contracted for in June, 1901, is now nearing completion and will afford excellent protection from the high winds which occasionally prevail, especially during the spring.

The climate of Fort Bayard permits of comfortable outdoor life during the entire year. During the year 1901 there were 38 rainy days with a total precipitation of 8.94 inches. One hundred and ninety-eight days were perfectly clear, 151 partly cloudy and only 16 were wholly cloudy.

The mean maximum and minimum temperatures and the precipitation for the past decade are as follows:

Month.	Mean Max.	Mean Min.	Annual Precipitation.
January	52.81	24.41	1892.... 8.89 in.
February	54.23	29.85	1893.... 15.47 in.
March	60.41	31.12	1894.... 9.12 in.
April	68.02	37.31	1895.... 15.09 in.
May	77.46	45.05	1896.... 18.85 in.
June	86.91	53.24	1897.... 18.00 in.
July	82.75	55.56	1898.... 15.91 in.
August	85.29	57.53	1899.... 10.43 in.
September	82.07	52.27	1900.... 12.66 in.
October	70.84	41.45	1901.... 8.94 in.
November	60.70	32.15	
December	53.75	25.23	
General average....	69.60	40.50	13.34

In reporting our results from the incipience of the hospital to March 31, 1902, I will adhere to my original classification, excepting that, as three cases formerly reported "cured" have had a recurrence, I have substituted the term "clinically cured" for such cases in which all symptoms have disappeared and no reaction follows the tuberculin test. Those in which no bacilli are found in the expectoration after repeated examinations and, though presenting no evidence of active disease, still react to tuberculin, are classed as convalescent.

In my report to the Surgeon General for the period ending Dec. 31, 1900, patients were divided into three classes representing their practical division while under treatment: Class 1, cases afebrile without tubercle bacilli in their sputum; Class 2, cases afebrile with tubercle bacilli in their sputum, and Class 3, cases permanently febrile with tubercle bacilli in the sputum. The first class, those with no bacilli, have separate dormitories, and the third class, with permanent fever, are confined to the infirmary.

For the purpose of graphically representing on a diagrammatic chart the degree of involvement of lung tissue found on physical examination, cases are divided into three stages: 1, infiltration; 2, consolidation, and 3, excavation; corresponding to what are generally known

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. Arthur H. Reynolds, George Cook and Heman Spalding.

as incipient, moderately advanced and advanced cases. In this classification is considered only the anatomic character of the involvement, irrespective of its extent or the area involved. On the charts infiltration is repre-

REPORT OF RESULTS TO MARCH 31, 1902.	
Admitted from Oct. 3, 1899, to March 31, 1902 (of these 55 were readmitted after discharge).....	623
Remaining under treatment March 31, 1902.....	174
Discharged and died.....	449

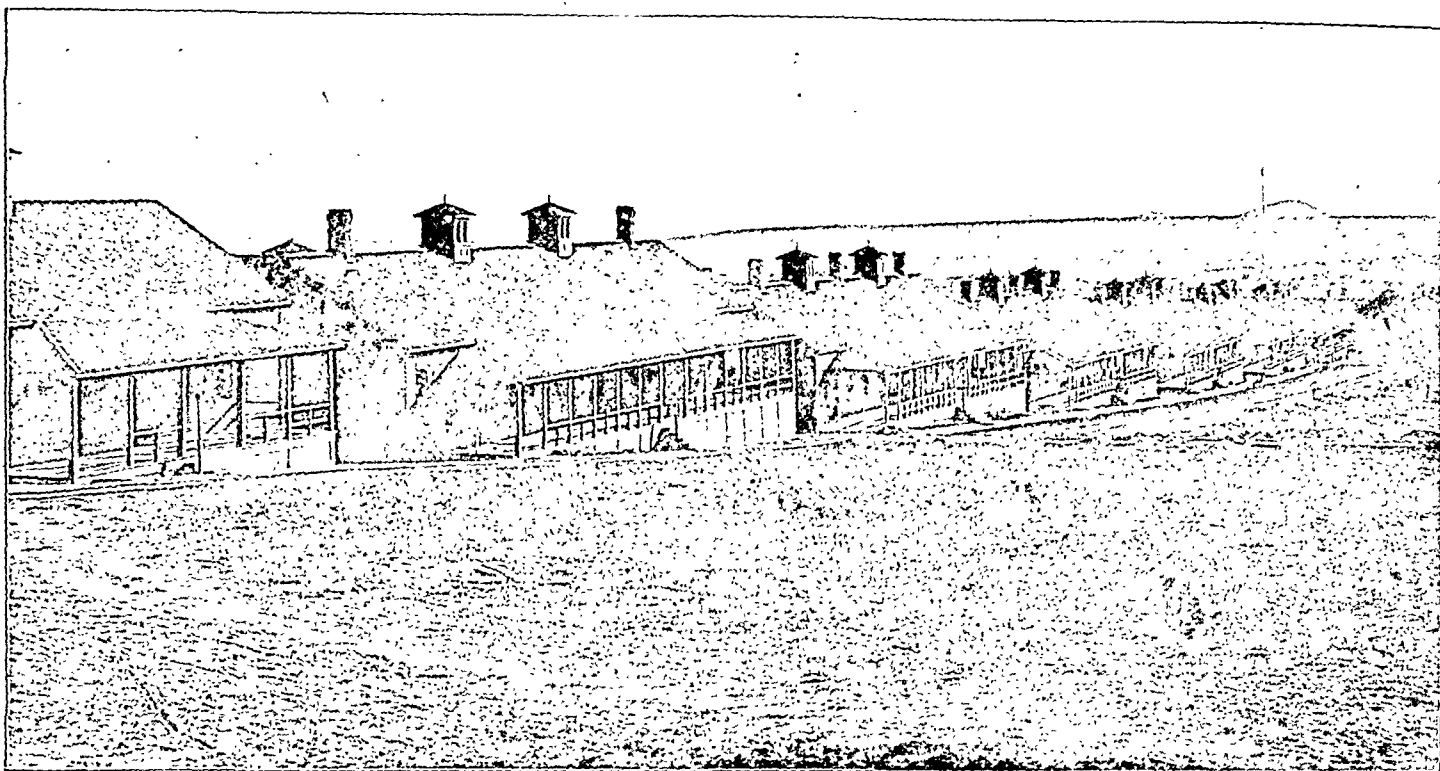


Fig. 1.—Dormitories.

sented by parallel lines, consolidation by crossed lines and excavation by an outline of the shape and proportionate size of the cavity or cavities as found on physical examination. Emphysema, hypertrophy, atelectasis, pleurisy and other conditions may also be indicated on the chart. The letters are explained as follows: C., consolidation; D. C., dry consolidation; A. C. C., almost complete consolidation; Cav., cavity; D. Cav., dry cavity; I., infiltration; S. I., slight infiltration; A. I., active infiltration; N. A. I., non-active

RESULTS IN 449 CASES DISCHARGED OR DIED.

	Percent.
Clinically cured, average residence 8 mos. and 7 days..	33 7.4
Convalescent, average residence 5 months and 21 days..	52 11.6
Improved, average residence 5 months and 15 days....	157 34.9
Unimproved, including 17 discharged in less than 1 mo.	113 25.2
Died, including 25 in less than 1 month.....	94 20.9

RESULTS IN THE THREE STAGES.

Stage.	Clinically Cured.	Convalescent.	Im-proved.	Unim-proved.	Died.	Total.
First	25	33	75	16	1	150
Second	7	12	50	38	9	116
Third	1	7	32	59	84	183
Total	33	52	157	113	94	449

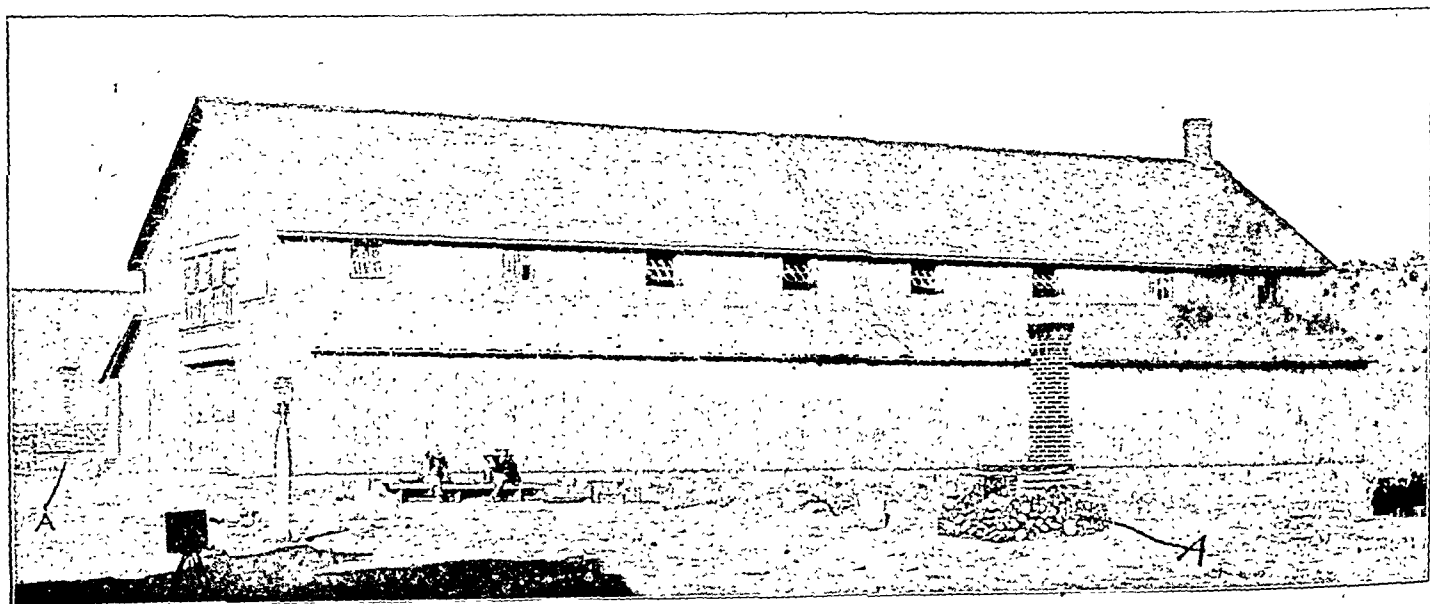


Fig. 2.—Gymnasium with crematory (A) on either side.

infiltration; D. I., dry infiltration; P. E., pleural effusion; H. P., heart's position.

Our patients are thoroughly examined every two months and also in the interim, when the symptoms indicate the existence of some intercurrent trouble.

The one death in the first stage was due to tuberculous appendicitis. Of the 9 deaths in the second stage 5 were from laryngeal or intestinal tuberculosis, 2 from empyema, 1 from rupture of an aortic aneurism and 1 from acute tuberculous pneumonia.

While, ordinarily, sanatoria for the treatment of pulmonary tuberculosis admit only about 25 per cent. of cases examined, as being suitable for admission, one of the purposes for the establishment of this hospital is to remove all recognized cases from the wards of general and post hospitals and from the Soldiers' Home at Washington, D. C., to prevent the propagation of the disease. Patients who are still in the service are sent to the hospital by order of the War Department, regardless of their condition or of their desire to come. They are not selected for treatment in a high altitude, and doubtless a small minority, even of those in the milder stages, would do better at a lesser elevation. A large majority do not realize the gravity of their affection and the importance of remaining until they are clinically cured. When they feel perfectly comfortable, with no pain or other subjective symptoms, it is usually impossible to make them understand the necessity of remaining longer under the essential restrictions of a sanatorium. In fact, very few Americans, especially of the class to which most of our patients belong, will voluntarily submit to a constant supervision and regulation of every detail of their lives, even to a lesser extent

bulant patients, and our results are much better in those who strictly comply with this rule. We administer it in the form of brandy, whisky, sherry and port, in moderate doses, only in the infirmary to patients with high fever and to relieve the extremely distressing debility in far-advanced cases.

The excessive use of alcohol is an important factor in producing a susceptibility to the disease by lessening tissue resistance, and our therapeutic efforts are directed to the development of this resistance in order to produce a tendency towards fibrosis. My observation has convinced me that in many cases its use retards and even prevents recovery. That alcohol and tuberculosis are antagonistic was formerly the general belief and is still the opinion of too many.

Nearly 80 per cent. of our patients come from the tropics, and in many of these, owing to the enervating effects of the tropical climate, the disease has made rapid progress before admission. Others in the milder stages in whom pulmonary tuberculosis followed malaria or dysentery, are very much emaciated on admission, and their improvement in nutrition and assimilation is often astonishing. Several have increased ten pounds in

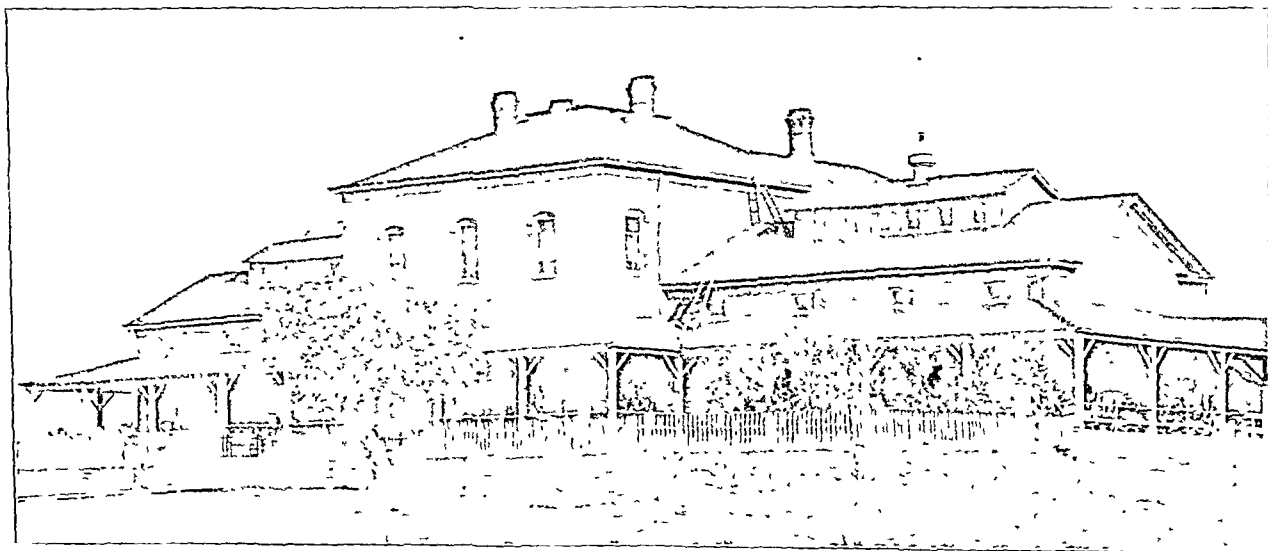


Fig. 1.—Infirmary.

than is in vogue in the German sanatoria. Nearly all of our patients are discharged from the army in a few months after admission, but these can remain indefinitely if they so elect, as beneficiaries of the Soldiers' Home. Being no longer in the army they are free to leave at any time, and many of the most favorable cases, in which there is every reason to expect recovery, leave before such recovery is possible. Quite a number have returned, with their general condition much aggravated and their pulmonary lesion much advanced, which is of course, to be expected in a disease in which even a single indiscretion may often turn the tide from a favorable progress and lead to a fatal result.

Another factor which militates strongly against more favorable results is that a large majority of our patients have been addicted to the excessive use of alcohol, either occasionally or habitually. Despite all our efforts to prevent it, many succeed in surreptitiously securing a supply of liquor and become intoxicated. Though in some cases of tuberculosis moderate doses of alcohol are of benefit in the treatment of certain symptoms, I have found it advisable to absolutely prohibit its use by am-

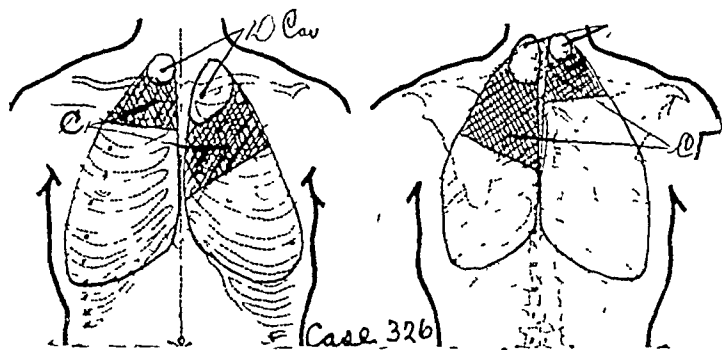
weight, and one gained twelve pounds in one week. Patients are weighed every Friday and a report prepared of the gains and losses, if any, in each case.

Following is a portion of the report of April 4, the first Friday following March 31, 1902. The whole report for that week shows that 75 men gained, 48 lost and 32 showed no change:

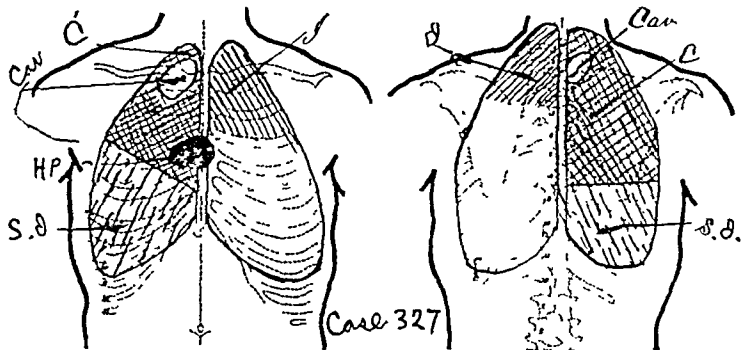
TABLE SHOWING WEIGHT, GAIN AND LOSS FOR WEEK ENDING APRIL 4, 1902

Name	Weight	Gain.	Loss.
Adams	117	4	..
Alexander	132	..	1
Andrews	130	3	..
Bailey	141	..	1
Bardison	109	1	..
Barry	128	..	2
Rass	136	..	..
Benton	133	1	..
Black	120	1	..
Bowman	127	4	..
Brady	127	..	5
Briggs	142	..	..
Bryant	155	..	2
Burch	127	..	2
Burns	92	..	4
Burton	96	..	4
Cantwell	102	1	..
Carroll, D.	133	3	..
Carter, 1st	117	1	..
Carter, 2d.	123	..	2

to gently fill the lungs. Then following me in the exercise, at the command "one" they slowly inspire until the lungs are filled, and, resting a few seconds with the lungs inflated, at the command "two" rapidly expire. These exercises gradually increase the chest measurements and the expansion of the lungs and also cause the disappearance of temporarily collapsed areas, and I have hitherto observed no detrimental effects.

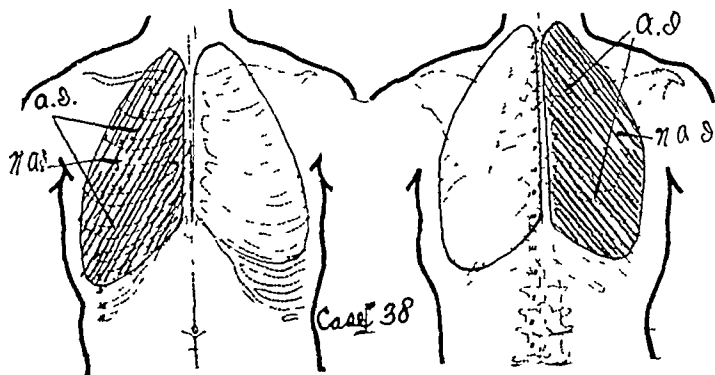


After the breathing exercise the patients scatter, some to receive local or special treatment and others to report for their bimonthly examination. The remainder walk or sit on the porches, where comfortable chairs and couches are provided, and engage in such pastimes as their fancies dictate. No violent exercise, such as bicycling, horseback riding, tennis or baseball are per-



mitted, but they are encouraged to play croquet, quoits or golf.

Patients are required to carry spit cups, consisting of common square tin frames containing a folded paper cup. I have devised a pocket cup which is made by patients, for the use of the officers and others engaged in light work, and which when made from suitable paper has been found very satisfactory.

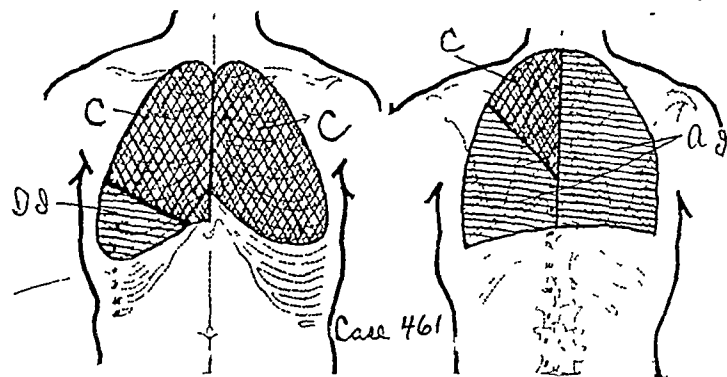


Large cuspidors are scattered on the porches and in the recreation rooms. These are also of folded paper in a tin frame and enclosed in a covered box, placed sufficiently high above the floors so that the covers can be conveniently lifted. The paper cups are all burned in brick crematories, four of which have been constructed at convenient locations.

In considering the effects of altitude on the symptoms, it must be remembered that altitude alone, without the

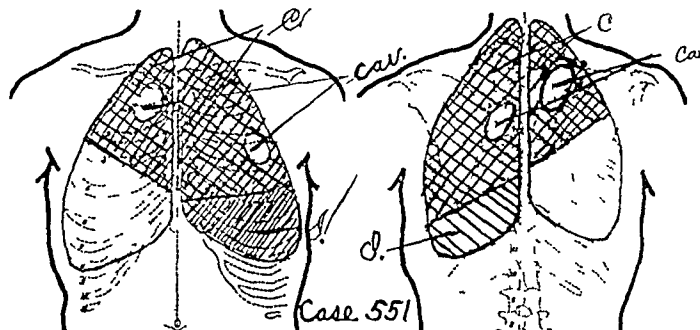
hygienic regimen, is of little avail. No locality, however favorably situated, can confer immunity, as cases of pulmonary tuberculosis originate in the most favorable climate.

Life in the open air, which is the keynote of our treatment, is at first uncomfortable, but in our dry air, bright sun and clear sky a tolerance is soon induced. Though



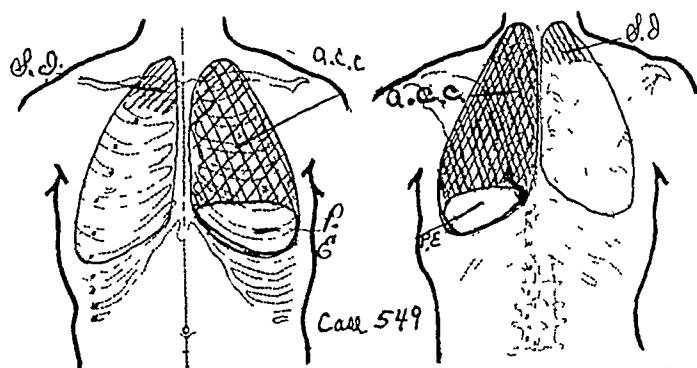
we have frequent winds, the air is so dry that they are not objectionable, unless they are very high, such as prevail for a short period in the spring. At no time during the summer is the temperature uncomfortably high in the shade, and for the past two winters 13 degrees above zero is the minimum record.

Cough, except in advanced and laryngeal cases, soon becomes less distressing. Ordinarily it is easily allayed



by heroin, in the extensive use of which I have yet to see tolerance produced or a habit formed. In a few cases it is a decided soporific, but I have never observed any untoward effects. Even in advanced cavity cases severe cough is readily ameliorated and the cavities are soon found dry on physical examination.

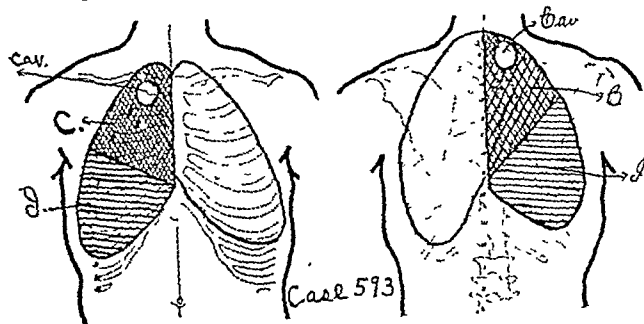
In far-advanced cases with no laryngeal disease or emphysema, the cough rarely continues distressing and the cavities are usually found empty postmortem.



Further experience confirms my statement of two years ago, that hemoptysis occurs much less frequently than at lower altitudes. Nearly 50 per cent. of our cases have a previous history of hemorrhage, and in many it has occurred very recently before admission. In very few has there been a recurrence, and when recurring it is readily controlled, excepting in those with large excavations. In these latter cases it is generally fatal, if

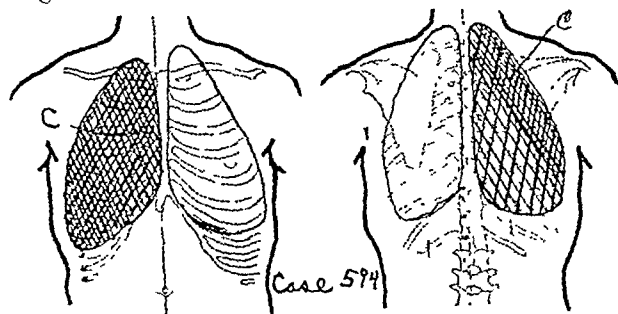
of the disease. This tends to confirm the opinion that the most important element in the causation of hemoptysis in the milder stages is increased arterial tension or vascular congestion, rather than erosion of the vascular walls, and its lessened frequency in higher altitudes is probably due to lowered arterial tension resulting from diminished barometric pressure. Doubtless the prohibition of violent exercise is also a potent factor in its prevention.

Night sweats are rare and readily amenable to treatment. Laryngeal ulceration in the early stages has frequently been cured with simple palliative treatment and even when accompanying advanced and extensive pulmonary involvement has in some cases disappeared. Small pleural effusions are usually absorbed. If sufficiently large to require paracentesis for the relief of



the dyspnea, there is, as a rule, no recurrence if the effusion is sero-fibrinous. In the tubercular involvement of other parts, especially of the cervical lymphatics and of the ribs, the lesions have improved equally as well as those of the lungs.

The longer I observe the effects of treatment in a high altitude, the more I am convinced that a larger variety of cases are amenable to its beneficial influence than is commonly believed. Cases with extensive cavities in both lungs and in which pyrexia continued for several months after admission, have finally improved to such a degree that ultimate recovery is probable.



As shown in the chart of increase of weights extreme emaciation can not be considered a contraindication, nor does old age preclude a prospect of improvement in high altitudes. Two patients over 60 years of age have returned to the Soldiers' Home clinically cured.

We have carefully weighed the heart in all post-mortem examinations to determine whether this organ is congenitally small, as alleged, in those susceptible to pulmonary tuberculosis. We now have records of 73 autopsies in which we have found as follows:

Average weight of heart	292.2	grams.
Smallest heart	150	grams.
Largest heart	460	grams.
Number above average	41	
Number below average	32	

Investigations were recently instituted by Asst.-Surg. H. D. Bloomer and Contract-Surgeon J. J. Curry

of the hospital staff, on the condition of the blood in tuberculosis, with a view of ascertaining whether it would furnish any information of diagnostic or prognostic value.

Since commencing these studies they have made 58 examinations of the blood in 38 patients, of whom 17 were in the first stage, 8 in the second stage and 11 in the third stage, and 2 were cases of bone tuberculosis. Their records show marked irregular variations, not only in the number of red cells and leucocytes, but in the differential count.

In the first and second stage cases, while the average red cell count is practically normal, the leucocytes vary from 5,800 to 26,000, and the degree of leucocytosis, with few exceptions, corresponds with the extent of the pulmonary involvement. The eosinophiles were increased in three cases to 17, 22 and 27 per cent. respectively, careful search failing to reveal any assignable cause for this increase. In the third stage cases the hemoglobin and red cells were decidedly below the normal and the leucocytes greatly increased, averaging 28,374, the increase being almost entirely in the polynuclear neutrophils. The condition is therefore such as occurs in septic infection.

With the co-operation of Col. A. C. Girard, commanding the U. S. General Hospital, Presidio, San Francisco, we have also commenced a study of the effect on the blood of high altitude. At his request Contract-Surgeon Charles F. Craig, the pathologist of that hospital, is furnishing us a full report of the condition of the blood of patients immediately before transfer to Fort Bayard.

The average normal blood count at Fort Bayard is 6,000,000 to 6,500,000 red cells and 8,000 to 10,000 leucocytes. This is somewhat higher than that reported by Solly and by Campbell and Hoagland at Colorado Springs, and somewhat lower than that reported by Egger at Arosa, both practically at the same altitude.

Notwithstanding their tropical service and the fatigue of the long journey from the Philippines to Fort Bayard of patients transferred from the Presidio hospital, the average red cell count on arrival was 5,705,000, only slightly below the normal and an average increase of 1,604,000 above the count at the Presidio.

The hemoglobin average was 85 per cent., showing that it does not increase in the same ratio as do the red cells.

SYMPOSIUM ON TUBERCULOSIS.

This series of articles will be continued in succeeding issues as follows:

Sanatorium Treatment of Tuberculosis Analysis of Three Hundred Cases Treated by the United States Marine-Hospital Service Sanatorium. P. M. Carrington, M.D., Fort Stanton, N. M. (Illustrated.)

The Sanatorium Treatment of Consumption. E. G. Donney, A.M., M.D., Denver.

Some Practical Points on the Treatment of Pulmonary Tuberculosis. J. Edward Stubbert, M.D., New York City.

Recent Investigations Concerning the Relation of Human and Bovine Tuberculosis. D. E. Salmon, D.V.M., Washington, D. C.

The Intertransmissibility of Human and Bovine Tuberculosis: A Review of the Experimental Evidence. R. R. Dinwiddie, M.D., Fayetteville, Ark.

Sanitary Measures for the Prevention of Tuberculosis in New York City, and Their Results. Herman M. Biggs, M.D., New York City

To Prevent Dust Raising.—An Austrian material for preventing the rising of dust on sweeping proves to be cottonseed oil. In a test at Vienna, it was found that floors oiled twice a year could be swept weekly without any whirling of the dust, and the material was recommended for all rooms where many people were received, as well as for laboratories, libraries, and other places to be kept scrupulously dust-free.—*Canadian Druggist.*

ANATOMIC TREATMENT OF FRACTURES OF THE FEMORAL NECK.*

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KEOKUK, IOWA.*

Six per cent. of all fractures being through the neck of the femur, giving as a result nonunion in the majority of cases with useless limbs, renders the subject of enough importance to justify its consideration in the light of all the latest attainable information.

There is nothing to be gained by attempts to differentiate between intra-extra-capsular and mixed varieties, for when not impacted their management to be successful can differ in no essential particular. Diagnosis is rarely attended with difficulty, the assemblage of symptoms being characteristic. This is, however, not true in the penetration or impaction cases when immediate

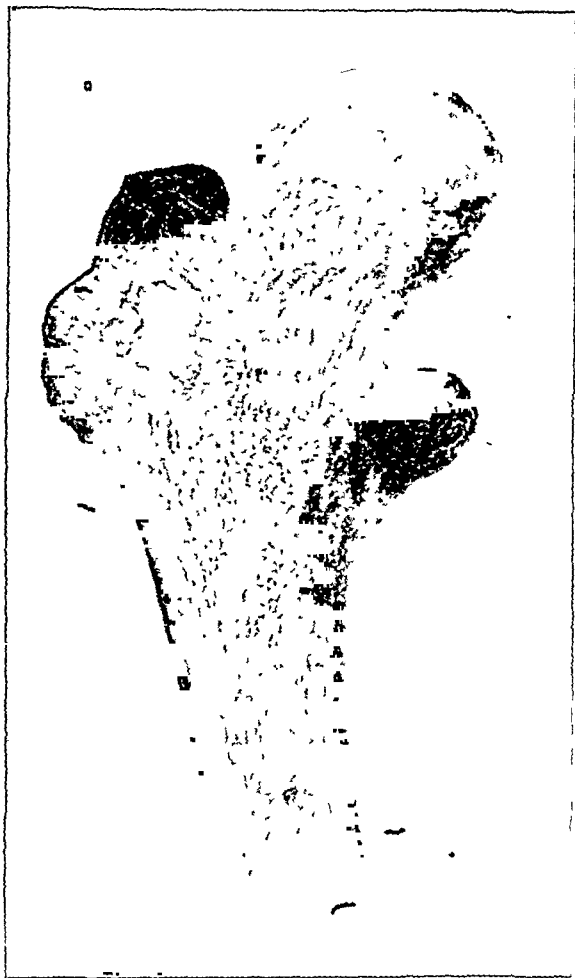


Fig. 1.—Fracture of neck of femur in Case 2. At 72 years of age, used 20 years afterwards. No perceptible shortening.

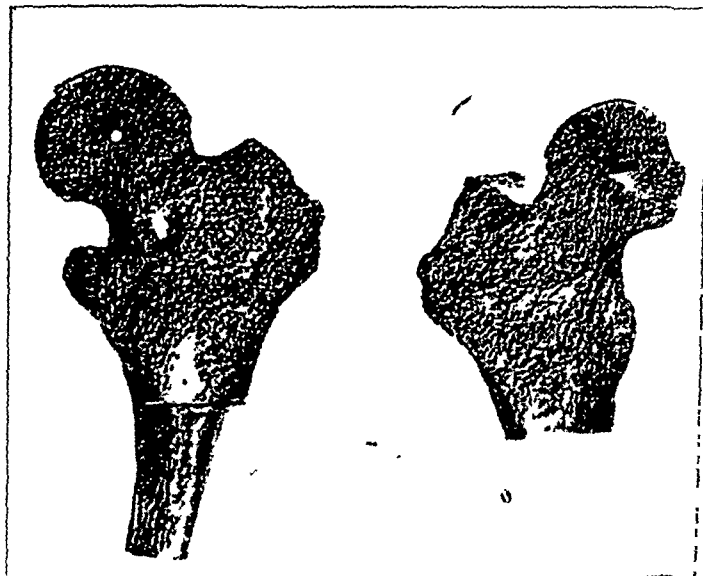
diagnosis may be impossible or methods to obtain it unjustifiable. In such cases the diagnosis will usually be cleared in a few days by loosening of the fragments or the impaction remains permanent and insures a good result barring complications in themselves serious. Our leading surgical authorities inform us that permanent impairment is to be expected, death is not uncommon and that nonunion usually results from fracture through the narrow part owing to impossibility of accurate coaptation and immobilization of the fragments. That this latter statement is erroneous I hope to demonstrate beyond a controversy.

The treatment which is here advocated is applicable to any solutions of continuity involving any part of the femoral neck and its connections to the shaft, to all

ages and physical conditions, gives as great comfort as any known plan, is easy of application, requires little time to adjust, requires no elaborate apparatus, gives no danger of pressure injury, places the fragments in apposition when properly adjusted and overcomes all displacing tendencies of weight and muscular action, which are the principal factors in preventing union and causing deformity or impairment of function. That bony union has occurred in all varieties of fracture of the femoral neck is no longer denied by well-informed medical men. That useful repair in the aged treated by the usual methods occurs only in a small per cent. is recognized by all physicians and attested by cripples from this cause in almost every community.

Twelve years ago I became impressed with the reasonableness of the method and results obtained by Prof. T. J. Maxwell in fractures of the femoral neck and have used the method in all my cases since and taught it to my medical classes. Dr. Maxwell has practiced and advocated the method for thirty-two years.

I published a report of seventeen cases in *THE JOURNAL* Aug. 26, 1899. Again at the St. Paul meeting last year I presented a supplementary report of eight cases, making a total of twenty-five. This paper was published



Figs. 2 and 3.—Vertical section of femoral neck fractured 20 years before. Case 2 of former report.

in *THE JOURNAL* Dec. 21, 1901. At the St. Paul meeting I also presented a specimen of a bone broken in a man aged 72 years. This was Case 2, R. P., reported by me Aug. 26, 1899. (Figs. 1, 2 and 3.)

It represents the result in the second case treated by Dr. Maxwell and gave its possessor satisfactory service for twenty years thereafter, though slight eversion gave constant testimony to its former solution of continuity. It also gives eloquent testimony to the possibilities in intracapsular fracture. The trouble is the result is too good to be believed by those who are unacquainted with Dr. Maxwell's skill in adjusting and retaining such fractures and do not understand the aid of the capsular ligament when properly utilized as a retaining force.

Perfect adjustment of the fragments must occur when traction is made in line with the normal axis of the femoral neck, provided the capsular ligament is not almost or quite destroyed, together with the surrounding muscles. This fact I have demonstrated by experiment on the cadaver.

Adjustment and retention of the fragments are easy and certain if the anterior strongest part of the capsule remains intact. Sufficient traction in the normal line of

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard

the femoral neck compels the capsular ligament to act as a close-fitting sleeve, to adjust and align the fragments; and if said traction be maintained the relation will also be undisturbed.

The tendency is for the lower fragment to fall behind and then be drawn upward and inward while it is usually rotated outward, causing an upward inward displacement of the lower fragment. It necessarily follows that the anterior part of the capsule falls across the upper fragment, which is frequently tilted forward, and if proper traction is made it will carry the upper fragment, now free of any muscular attachment, passively into line. The anterior part of the capsule, including the Y ligament, can always be depended upon, for it yields only to a force almost sufficient to produce evulsion. The action of the psoas and iliacus is normally that of a flexor with neutral or internal rotation. When a solution of continuity occurs in the femoral neck they immediately become pronounced external rotators. (Figs. 4 and 5).

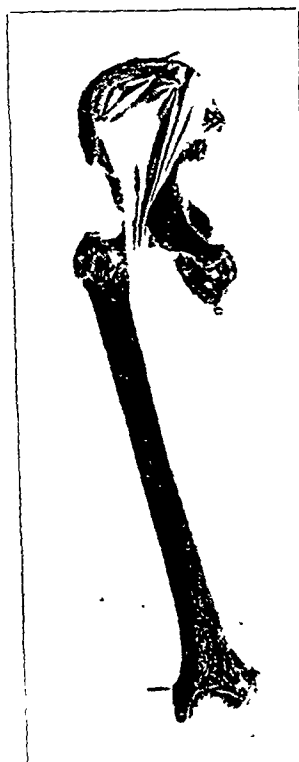


Fig. 4.—Shows normal position, relation and line of action of the psoas and iliacus.



Fig. 5.—Muscle pushing itself or other soft parts between the fragments and producing external rotation.

They not only become external rotators, but often force the soft parts between the fragments. By so doing they make union impossible unless the impediment be removed, first by flexion, which raises the line of muscular action above the fragments. Then make and maintain traction on a line with the normal femoral neck, thus preventing tissue from being caught between the fragments.

In the fifteen additional cases which I have collected since the last annual meeting, I have given the names, as in my previous reports, of the physicians in charge and their addresses. Two of these cases have furnished us specimens, one of which should put forever at rest all questions as to the possibility of obtaining a result equal to that shown in Case 2. One proves the possibility of bony union with slight impairment of function in a case 81 years old treated by a novice.

The poor results usually obtained in treating fractures of the femoral neck have been explained in many ways, but most recent authorities have agreed that the important reason was imperfect adjustment and failure to maintain immobilization. It has been assumed that these difficulties could not be overcome. No greater error, I think, has been fostered by the profession for the manufacture of cripples. It may be urged that the direction of the breaking force may have thrown the distal end of the upper fragment backward, and entirely separated the posterior part of the capsular ligament, thereby leaving no tissue to direct the fragments into line. If, however, the directions, positions and relations of the quadratus femoris, obturator internus, obturator externus, gemelli, pyramidalis, psoas and iliacus is remembered, we will understand at once that the close relations of these muscles to the parts concerned will enable them to reinforce the capsule, however badly it may be injured, so that if they are all rendered taut by traction in the normal line of the femoral neck they will readily bring the fragments into position.

In non-penetrating fractures of the femoral neck the position of the fragments must depend largely on the position of the patient, the kind of retaining force and his own muscularity. Muscular action is of as much importance in determining results of fracture here as anywhere else in the body. This is due to the great number and power of the muscles passing over the fracture line and exerting their force at varying angles,

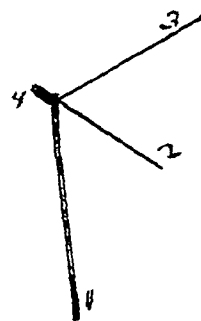


Fig. 6.—Illustrating lines of action of longitudinal and lateral extension and their resultant made necessary to overcome oblique action of the muscles. 1, Shaft line of longitudinal traction; 2, resultant; 3, line of lateral traction; 4, femoral neck.

the resultant of which is in line with the femoral neck. The sartorius, rectus, gracilis, semi-membranous, semi-tendinosus, long head of the biceps, tensor vagina femoris, vertical portion of the adductor magnus and portions of the gluteus maximus medius and minimus exert a powerful upward displacing force. This is further reinforced by the oblique upward and inward pull of the adductor magnus, longus, brevis and pectineus. The inward pull of some of these latter is very pronounced. Those which pull almost directly inward and rotate outward are the pyramidalis, obturator externus, gemelli superior and inferior, obturator internus, quadratus femoris and lower half of the gluteus maximus.

The method of treatment is as follows: Patient on the back, first flex the thigh on the abdomen to relax the psoas and iliacus and bring their line of action above the neck of the femur and so prevent them from in any way forcing soft tissue between the fragments. Then make extension while an assistant makes traction outward and raises the trochanter major to the same level as its fellow. Fifteen to twenty-five pounds weight is now to be used over a pulley to make downward extension on the leg. This is accomplished by

the ordinary Buck's extension with wide adhesive straps extending well above the knee. Binders' board or other material should now be molded to the internal, anterior and posterior aspects of the upper parts of the injured thigh, and around this a broad band of muslin or other material is extended by a cord through a pulley at the side of the bed, to which is attached a weight of from eight to sixteen pounds. This lateral pulley must be placed at such a height and have sufficient weight to overcome the tendency to eversion and to carry the trochanter to a level and of equal prominence with the opposite side. When this is done the direction of the pull will usually be outward, ten degrees upward toward the axilla and forward at an angle of about 45 degrees. The upward direction is to keep the padded binders' board on the inner side of the thigh, well up to the perineum and to make the resultant

the patient to slide toward the foot of the bed, and amounts to from ten to fifteen inches, according to the amount of weight required to overcome the muscular action. The side of the bed corresponding to the injured limb is also raised enough to overcome the tendency of the patient to be drawn toward the lateral pulley. The tilting required will be from two to five inches and will depend somewhat on the width of the bed. A single narrow iron bed is to be preferred. The anatomic method adds no complications to an already grave condition by operation or otherwise.

I have yet to know of a single patient with fracture of the femoral neck treated in this way who has complained of pain in the hip after suitable adjustment of the weights and pulleys, nor have they complained of

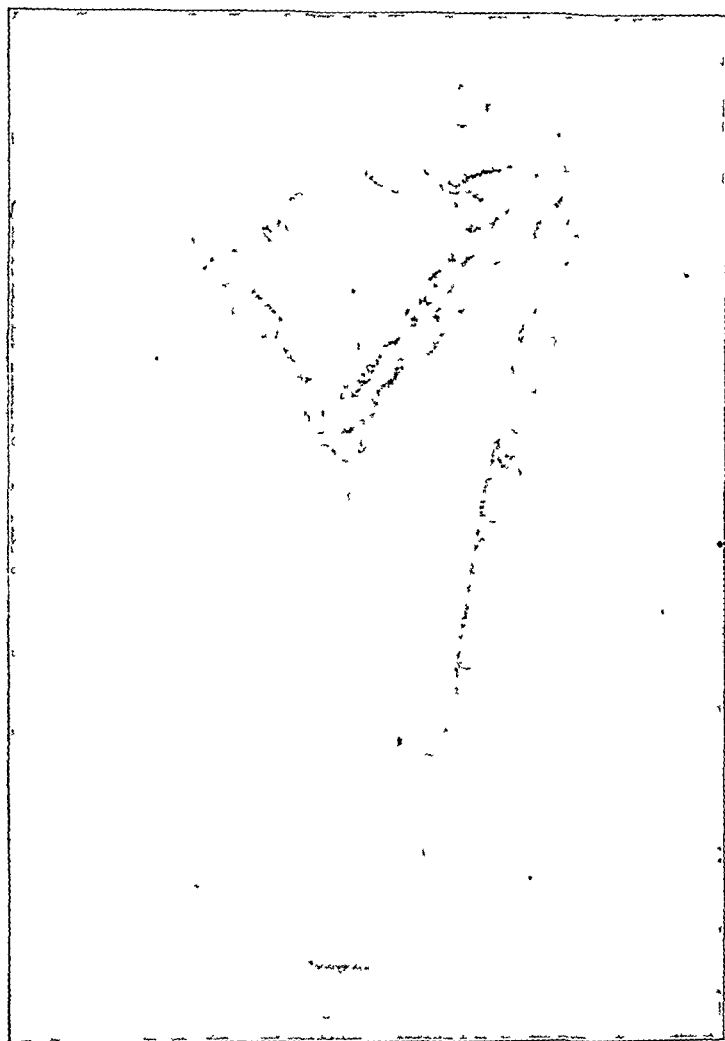


Fig 7—Anterior view Case 29

of the lateral and longitudinal forces fall in line with the femoral neck.

The binders' board is used on the inner side of the thigh to enable a wider bearing surface to be maintained, that no discomfort shall be caused by the connecting band to the pulley folding into a cord and tending to cut into the thigh. The usual precautions are necessary to protect the malleoli from pressure and to keep the patient clean. Bed and pressure sores can be avoided with reasonable care. The knee should be flexed every four or five days to prevent ankylosis, as neglect of this precaution has caused the patients more subsequent annoyance than anything else.

The counter extension for longitudinal and lateral traction is made by the patient's weight. The foot of the bed is raised enough to overcome the tendency of



Fig. 8.—Posterior view. Case 29

pain or other discomfort from the movement necessary to put the bed-pan under them, nor when raised to the sitting posture for cleansing, changing clothes, etc. Daily raising of these patients to the sitting posture, as above indicated, will not in the least disturb the fragments if the longitudinal and lateral traction is steadily maintained. These patients within one or two days can usually raise the hips themselves with the sound leg so that the bed-pan can be readily used. Four to six weeks of confinement, which is all that is usually needed to procure union, is not an element of danger in itself; besides, no plan of treatment or nontreatment so far devised can give greater if equal comfort and freedom of movement.

CASE 26—Mrs. Wagner, aged 69 years. Physician, Dr. Stanmeyer, Bonaparte, Iowa. Fell Jan 19, 1894, on icy side-

walk. Dr. T. J. Maxwell, Keokuk, saw the case in consultation. The usual signs of fracture of the left femoral neck were present. Shortening two inches—says Dr. Stanmeyer—foot everted completely, hip flattened, leg helpless and crepitus. Longitudinal and lateral extension was applied for seven weeks. No perceptible shortening. Weight of patient about 200 pounds. Soon regained complete and perfect use of the leg. Leg measured seven years later by Drs. Maxwell and Stanmeyer and no shortening was discoverable. Patient said: "I have had perfect use of my limb ever since recovery from the break, and have been able to walk without limp, halt or pain."

CASE 27.—Mrs. E. M. Dillemath, aged 68 years. Physician, Dr. G. L. Watson, Pomeroy, Iowa. April 26, 1897, patient slipped and fell on stone steps, striking right hip. Examination gave abnormal mobility, change in shape of hip, short-

shortening. Complained of no pain whatever after treatment was begun. Says: "I am the happiest woman on earth, because I never expected to walk, for I know of three cases of the same injury who were never able to walk."

CASE 29. Mr. George Royce, aged 81 years. Physician, Dr. Fordyce, Ainsworth, Iowa. Sustained fracture of the neck of the femur Jan. 28, 1901, by a fall upon the frozen ground. Shortening was two inches, distinct bulging on the anterior aspect of the groin and thigh, foot was everted and the slightest motion caused excruciating pain in the hip. Crepitus was elicited under chloroform. Buck's extension and counter-extension was applied at once. Adhesive straps extended above the knee. Between 15 and 20 pounds were used as extension weight. Pain was severe during the night in the hip; 10 pounds were then put on in lateral extension, which gave immediate and permanent relief.

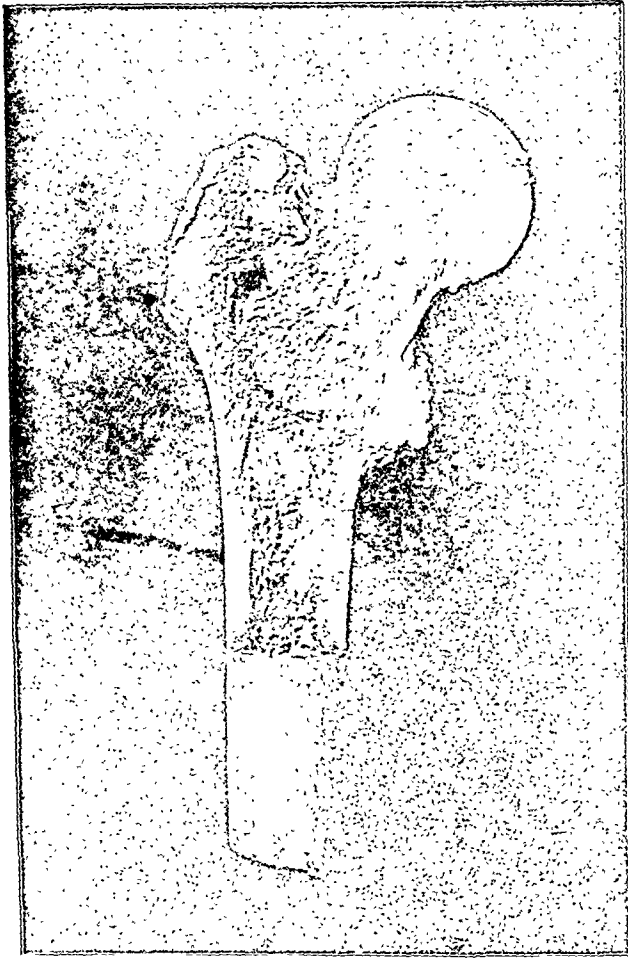


Fig. 9.—Case 34.

ening one and one-half inches, foot everted, slight crepitus and severe pain. Diagnosed as intracapsular fracture and treated by Dr. T. J. Maxwell's method. Discharged June 20, 1897. Shortening one-fourth inch. Weight 168 pounds. Use of the injured limb as free, easy and satisfactory as the other. Does all her own work and walks long distances without discomfort. Had to be raised frequently while under treatment on account of suffocation from goiter. Dr. Watson says: "The fractured limb pained her but little after in position. I shall continue to use and advocate the use of this method for like cases as certain to bring better results than any other at present advocated."

CASE 28. Mrs. I. S. Nash, aged 72 years. Physician, Dr. A. John Droz, West Chester, Iowa. Feb. 22, 1899, sustained fracture of the left femoral neck, which was diagnosed by shortening, eversion and preternatural mobility with pain. Shortening one and one-half inches. Treated by extension and lateral extension. Discharged April 25, 1899, with no



Fig. 10.—Case 34.

REMARKS.—Treatment was continued for seven weeks. He regained perfect use of the limb and walked without crutches. Shortening of the limb was practically nil; never could make out one-fourth inch. Foot was slightly everted. Middle of following August had sunstroke, from which he never recovered, and he died Sept. 6, 1901. Specimen which I herewith present was secured postmortem by Dr. Fordyce. Fig. 7 anterior and Fig. 8 posterior view.

CASE 30.—Mr. C. Louder, aged 86 years. Physician, Dr. T. F. Jones, Fairfield, Iowa. Fractured the right femoral neck May 20, 1901. Two inches of shortening, eversion of the foot and crepitus were the evidences obtained of fracture. Treatment was begun at once and continued to May 25, 1901. A good, useful limb was obtained with one inch of shortening by extension in line with the femoral neck. Very little pain or discomfort was complained of.

CASE 31.—Mrs. S., aged 47. Physician, Dr. J. W. Holliday, Burlington, Iowa. Sustained fracture of the right femoral

neck by fall on a step. Diagnosis was made under chloroform, crepitus was obtained, there existed eversion of the foot and one and three-fourths inches of shortening. Injury sustained Feb. 8, 1901. Discharged April 25, 1901. Shortening three-fourths of an inch. Discomfort much less than usual and principally from the knee.

CASE 32.—Miss Pauline Miller, aged 56 years. Physician, Dr. A. C. Bernays, St. Louis, Mo. Fracture of the left femoral neck occurred as the result of a fall at night. Admitted into the service of Dr. Bernays April 17, 1901. Discharged July 23, 1901. Treatment was begun the next morning after the injury. Diagnosis of fracture was made by shortening of two inches with crepitus and eversion. Treatment by longitudinal and lateral extension. Treatment was discontinued after nine weeks. Shortening was one-half inch. Walks without cane in the house, but uses cane on the street. The treatment was comfortable to the patient.

CASE 33.—Mrs. R. Birlingame, aged 68. Physicians, Dr. J. F. Swarens, Beacon, Iowa, and Dr. C. C. Thompson, Keokuk, Iowa. May 1, 1901, patient had an attack of apoplexia, from which she partly recovered. On May 29, 1901, while walking across the floor she tripped and fell, producing fracture of the right femoral neck. With longitudinal and lateral extension the patient became rapidly comfortable, and remained so until July 16, 1901, when she sustained another attack of cerebral hemorrhage, from which she died one week later. She had good union with no shortening. Postmortem was not permitted.

CASE 34.—Mr. Rankin, aged 74. In feeble health from cerebral softening, sustained fracture of the neck of the right femur May 10, 1901. Examined by Prof. Geo. F. Jenkins and Dr. C. A. Jenkins, both of Keokuk, and by them found to have two inches of shortening and complete eversion of right leg and foot. The case was diagnosed as one of undoubted fracture of the femoral neck, and affidavits to that effect were sworn to by them before a notary public. Dr. T. J. Maxwell was called in the case about May 18 and assumed its subsequent management with Dr. C. A. Jenkins. The case was treated by extension, counter and lateral extension for four weeks, at the end of which time he was found dead in bed. He had complained of no pain whatever after the dressings were applied. Careful measuring of the limb failed to show any shortening whatever. Postmortem was made the next morning after death by Dr. T. J. Maxwell, at which the writer was present and the specimen secured, which I herewith exhibit (Figs. 9 and 10), showing line of fracture, only four weeks of treatment, union well advanced for the time, position is perfect, two inches of shortening had existed for one week before treatment was begun. The line of fracture is perfectly distinct in both sides and union has occurred, though too young to be absolutely solid as the unbroken bone. This case shows beyond a peradventure that repair may be had by this line of treatment in some cases which will show on the outside of the bone no signs of a solution of continuity, no shortening and no impairment of function even in the old.

CASE 35.—Mrs. Martha A. Gordan, aged 88. Physician, Dr. R. C. Ditto, Augusta, Ill. Sustained fracture of the right femoral neck May 17, 1901. Crepitation was obtained and was accompanied by complete eversion with shortening of one and one-half to two inches. Case was complicated with stroke of apoplexy with paralysis, which interfered with diagnosis. Treatment was begun for the fracture by extension, counter and lateral extension, May 23, 1901, and was continued for four weeks. Pain was relieved at once and patient remained comfortable throughout treatment. Shortening of three-fourths inch was the result. Owing to the paralysis and great enfeeblement of 88 years she has never been able to walk but a few steps. Patient is still living at nearly 89.

CASE 36.—Mrs. Peterson, aged 80 years. Physician, Dr. T. J. Maxwell, Keokuk, Iowa. Sept. 14, 1901, fell and fractured right femoral neck. Shortening was one and one-half inches, eversion was complete, flattening of the hip was marked and accompanied by complete helplessness. Was treated for six weeks with extension and lateral extension, at the end of which time union was found to have taken place with free and unobstructed movement of the articulation and no pain

whatever. Patient during treatment was frequently raised to the sitting posture to be cleansed and have clothing changed. Repeated measurements made by Dr. Maxwell and myself failed to reveal any shortening whatever. Raising to bathe her back and change clothing caused no pain and in no way seemed to interfere with repair.

CASE 37.—Miss Eva Marvel, aged 30. Physician, Dr. R. L. Casburn, Carthage, Ill., and Dr. C. E. Ruth, Keokuk, Iowa, consultant. Patient tripped, fell on the floor and sustained a fracture of the right femoral neck, which was at first supposed to be a dislocation, but under chloroform was, after a careful examination, found to be a fracture close to or at the head of the bone and apparently wholly within the capsule. Extension, counter and lateral extension was applied, which gave immediate relief to the pain which had previously been severe. Patient was first seen by me Oct. 24, 1901. The injury occurred six days previously.

Result: Examined and measured carefully by Dr. C. E. Ruth May 20, 1902. Can walk without assistance, but still uses one crutch most of the time. Shortening one inch. Motion perfect.



Fig. 11.—Case 39.

CASE 38.—Mr. Wesley Jarnigin, aged 62 years. Physicians, Drs. J. L. Robinson and W. H. Shaw, Monroe, Iowa. Fell on frozen ground Nov. 16, 1901, and fractured the left femoral neck. One and one-half inches of shortening with eversion and pain. Diagnosis made under chloroform. Treatment by extension, counter and lateral extension was begun at once. Patient was discharged Jan. 3, 1902, without shortening and with good use of the leg. Patient was immediately relieved of pain when the apparatus was adjusted and remained comfortable. Patient has plowed some with a walking plow this spring, which would be recognized as a thorough test as to the usefulness and capacity of the leg. He walks without a cane. Has a little soreness in the knee, supposed to be due to injury to the knee overlooked at the time or to prolonged extension of the knee without flexion.

CASE 39.—Michael O'Gorman, aged 52 years. Physicians, Dr. Frank B. Lucas and Dr. C. U. Collins, Peoria, Ill. Injury occurred Jan. 2, 1902. Treatment was begun January 3 and carried out in the county hospital at Peoria. Shortening two inches, eversion, preternatural mobility and crepitus. Fracture involved the left femur and was made under com-

plete anesthesia. Treatment by extension, counter and lateral extension was kept up until Feb. 12, 1902. Result: three-fourths inch shortening. Almost able to walk without crutch or other aid. Will have good use of the limb. Dr. Lucas says: "Patient suffered little discomfort after the Maxwell anatomic method was applied, and, I might say, less pain than any of my other six cases treated otherwise. No eversion of the foot exists at the present writing, April 30, 1902." I wish to state that Dr. Lucas made use of a very ingenious device to obviate the tendency to eversion by the adjustment of a bar across the top of the lateral pulley to the inner end of which the band around the upper end of the thigh was attached and to the other end of which the weight was attached. By this plan, should the patient move nearer to or farther away from the lateral pulley, the direction of the lateral pull was maintained at nearly an unvarying direction forward, upward and outward. (Fig. 11.)

CASE 40.—Adam H., aged 71 years. Physician, Dr. C. E. Ruth, Keokuk, Iowa. Fell April 26, 1902, on stone steps and complained of inability to move the leg and was in severe pain. On superficial examination I was undecided as to whether he had a severe bruise from fall or had impacted intracapsular fracture of the femoral neck, but inclined to the latter opinion, as marked flattening of the hip was easily demonstrated together with great pain on movement. Treatment was expected for five days, when the fragments began to disengage, shortening and eversion took place and patient was then removed to St. Joseph's Hospital and the anatomic method of



Fig. 12.—Illustrates method of applying longitudinal extension, counter and lateral extension.

treatment begun. Pain was at once relieved and patient remained comfortable save for a pleurisy which caused pain in left side for thirty-six hours. He was raised daily for cleansing, changing of clothes, etc., without pain. Large callus had formed by the tenth day. June 7, six weeks after injury, treatment discontinued, as union had occurred with good range of movement. Callus greatly reduced in size. Patient is able to sit up and is perfectly comfortable. Only one-fourth inch of shortening discoverable by repeated measurements by Dr. T. J. Maxwell and myself. Slight eversion exists. (Fig. 12.)

CONCLUSIONS.

Number of cases treated by this method so far reported, 40; number giving no demonstrable shortening, 16; number with one-half inch or less of shortening, 11; number with one inch or less of shortening, 10; number with flail limbs, no union, treatment abandoned in a few days, 3; total, 40.

Cases over 80 years of age, 9; union with ability to walk well, 5; non-union, 2; paralysis from debility with great age preventing walking, 2; total, 9.

Cases 70 to 80 years of age, 8; non-union, 0; good serviceable union, 6; died of brain softening, 1; union less than 2 months old, one-quarter inch of shortening, 1; total, 8.

Cases 60 to 70 years of age, 8; non-union, 0; good serviceable limbs, 8.

No failures to secure union under 80 years of age.

No failures to secure serviceable limbs in any case under 70 years of age.

Good serviceable union was obtained in 77.5 per cent.

Excluding 4 cases in which treatment was not continued 4 weeks gives serviceable limbs in 86 per cent.

Excluding cases in which treatment was abandoned within 4 weeks, death from intercurrent malady or in which the injury is too recent to report, gives good serviceable limbs in 100 per cent.

This Symposium on Fractures is to be continued by the papers of Drs. Thomson and Roberts, and the discussion on the three.

REPORT OF FOUR CASES OF SYPHILIS MISTAKEN FOR SMALLPOX,

WITH REMARKS ON THE DIFFERENTIAL DIAGNOSIS OF THESE TWO DISEASES.*

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PHILADELPHIA.

Of all diseases that protean and imitative malady syphilis is the one which is capable of most closely simulating smallpox. During almost every extensive epidemic of smallpox cases of the former disease are erroneously regarded as variola and are not infrequently sent into hospitals set aside for the treatment of this disease. This resemblance between smallpox and syphilis was noted by physicians several centuries ago. When syphilis was first recognized at the end of the fifteenth century it became necessary to distinguish it from smallpox which it occasionally resembled to a most striking degree. Variola was designated therefore small-pocks or smallpox, and syphilis, great-pocks or pox. (The word pock signified pouch or pocket, and was doubtless descriptive of the pocket left in the skin after the subsidence of the disease.) The same nomenclature was employed in the French language, *la petite verole* to indicate variola, and *la grande verole* or simply *la verole* to indicate syphilis. The error of confounding these two diseases is not confined solely to physicians of inexperience, but is from time to time made by those who have considerable acquaintanceship with smallpox.

CASES ILLUSTRATING THE RESEMBLANCE.

Since January, 1901, there have been treated at the Municipal Hospital about 1,900 cases of variola. Four patients suffering from acute syphilis were received during this period.

CASE 1.—C. H., a young woman of 21 years, was sent from another large hospital after having been seen by several physicians of repute. Nothing is known of the symptoms preceding the outbreak of the cutaneous efflorescence save that the patient was not sick enough to seek her bed.

The eruption appeared on April 14, 1901, as small pinhead-sized reddish papules, discretely scattered over the face, trunk and extremities. The lesions were most profuse on the back. In the course of two or three days small vesicles containing a little serum developed at the apices of the papules. On admission, April 25, some of the lesions presented small pustules with milky contents, others showed small crusts at their summits, but the vast majority were scaly.

The eruption remained more or less stationary for a week or ten days, when the patient was put on antisyphilitic treatment. During the period of her hospital stay she did not feel sufficiently ill to desire to remain in bed. About two weeks after admission she developed an iritis in the left eye which was in a short time followed by a similar condition in the right eye. After the disappearance of the eruption there remained reddish-brown stains and here and there on the back

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. W. T. Corlett, L. Duncan Bulkley and W. L. Baum.

oval pits. The patient had never been vaccinated, but secured a successful vaccination in the hospital.

CASE 2.—A colored man employed by a physician was sent into the hospital supposedly suffering with smallpox. On admission the disease was diagnosed as syphilis and the patient was placed in an uninfected building. He presented a generalized papular eruption over the face, arms, trunk and legs. On the following day he was discharged from the hospital.

CASE 3.—A young man, 20 years old, contracted a chancre about Sept. 1, 1901. October 21 he was examined by three skilful physicians, a professor of genito-urinary diseases, a professor of medicine and a city medical inspector. He was declared to have smallpox and was sent in to the Municipal Hospital. About a week prior to the development of the erup-

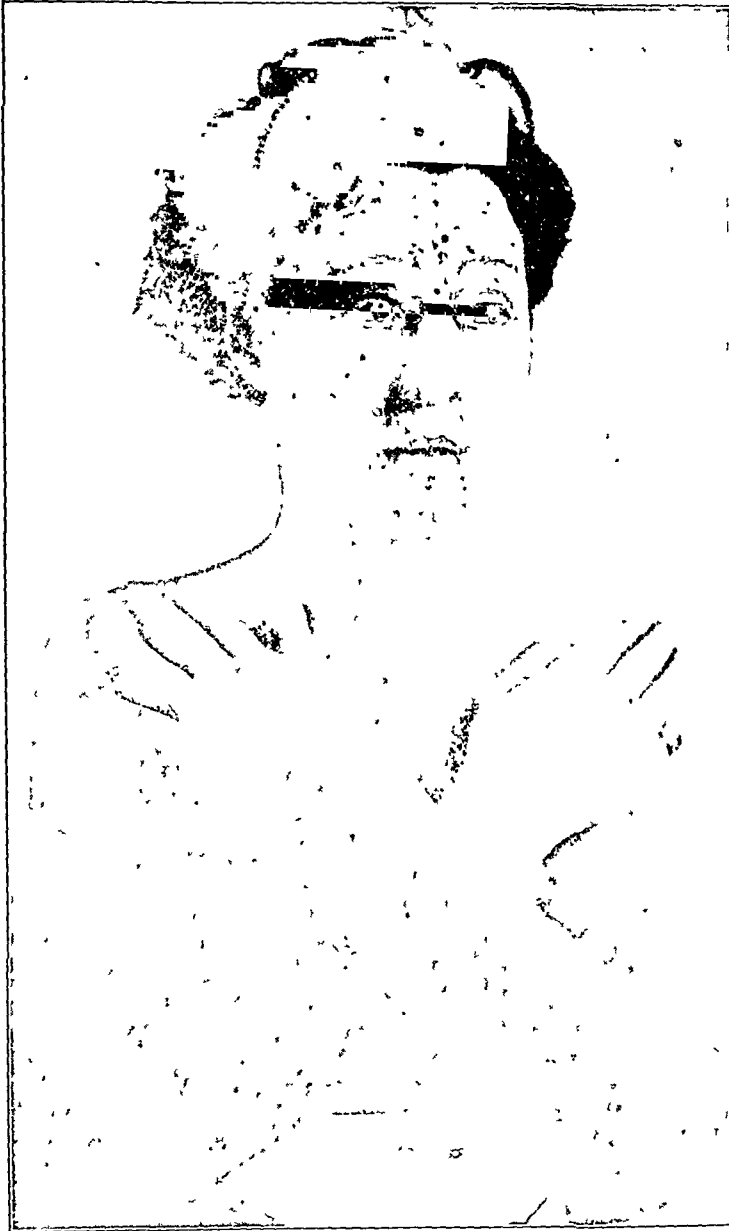


Fig. 1.—Case 1.—Papulo pustular syphilid sent to hospital as a case of smallpox.

tion the patient had slight headaches, chilly feelings, fever and night sweats. These symptoms, however, were not of sufficient severity to cause him to cease his work. He had been feeling languid and weak for a month or more preceding the appearance of the eruption.

At first sight the eruption would have passed for the efflorescence of a discrete smallpox. On closer inspection, however, it became evident that something was lacking in the picture, although it would have been difficult to express this deviation in so many words. The suspicion of syphilis was strengthened by the presence of the remains of the chancre.

The eruption, which was present on the face, trunk and extremities, consisted of small reddish papules, some of which had acquired vesico-pustular summits. In about ten days these had increased in diameter and were beginning to ulcerate be-

neath the crusts that had formed. A severe ulceration of the tonsils developed about this time. The patient was discharged from the hospital at the end of two weeks. By this time the ulcerative process had become pronounced. The lesions enlarged rapidly to the size of five-cent pieces, some indeed to the size of a silver quarter dollar. These became distinctly excavated and were covered with rupial-looking crusts. The soft palate was then attacked, extensive destruction of tissue taking place. The patient developed chills, high fever, sweats and rapid emaciation and was in imminent danger of death. Under the vigorous use of mercurial inunctions and a general tonic treatment, the patient improved and was again able to resume work. A couple of months later, although constant treatment had been kept up, the patient developed on the scalp two large ulcerating gummata. The malignancy of the disease in this patient is readily understood when such lesions manifest themselves scarcely eight months after infection. The point of interest in connection with this case is that a disease, later frankly syphilitic, should at the onset have presented such a strong counterfeit of smallpox as to have deceived several skilled and experienced physicians.

CASE 4.—A woman, aged 50, was sent into the hospital after having been carefully examined by several physicians. She presented on the face, trunk and extremities a generalized eruption consisting of lentil-seed-sized papules. She had had no distinct prodromal illness and was not at all prostrated on admission. On the left thigh near the groin was a round, firm, slightly elevated plaque about a centimeter in diameter with a superficially ulcerated surface. This was evidently the initial lesion of the disease which was diagnosed on admission as syphilis. The patient was immediately vaccinated and completely protected against the infection which surrounded her.

THE SIMILARITY BETWEEN THE TWO DISEASES.

It may at first thought seem strange that smallpox and syphilis should ever be confounded. On reflection, however, it will be seen that the diseases may have many symptoms in common. They are both infectious diseases, due, we may assume, to the invasion of the blood with a micro-organism. Each has a period of incubation, at the end of which there develop certain general manifestations accompanied by an exanthem and an enanthem. The resemblance may be still further accentuated by the fact that the variolaform syphilid is not rarely associated with and even preceded by fever and general aches and pains. It is particularly the pustular syphiloderm which is apt to be confounded with smallpox. This may be the first eruption to manifest itself or it may follow several months after the appearance of a macular or papular syphilid. The eruption at times may appear rather suddenly and pass through the stage of papule, vesicle and pustule in a surprisingly brief period of time. The lesions may be very firm to the touch and in other respects closely simulate those seen in small pox. Living, Jonathan Hutchinson and others have testified to the fact that in some cases the differential diagnosis is at the outset quite impossible. Hutchinson says: "The simulation of the variolous eruption by syphilis is the most marked example of syphilitic imitation. The papules are shotty to the finger, have depressed centers, affect the same region as variola and resemble it so absolutely that nothing but the history of the case can help the surgeon to a correct opinion."

HISTORY OF INFECTION WITH SYPHILIS.

In syphilis one can frequently obtain a history of infection and a description of the initial lesion. Indeed, the chancre or its remains may still be detected. Not uncommonly there are present associated evidences of syphilis, such as mucous patches, flat condylomata, ulceration of the tonsils, alopecia, etc. The variola-

form syphilid may develop after the disappearance of one of the earlier cutaneous outbreaks of syphilis.

DIFFERENCE IN ONSET.

The onset of the two diseases is, as a rule, quite different. The syphilitic patient will usually give a history of having felt weak and debilitated for some weeks. If fever precedes the eruption it is not very high and is not accompanied by severe prostration. When the rash appears the patient will usually call on the physician at his office or at a dispensary. We do not note that sudden illness which precedes unmodified smallpox. In this disease two or three days before the efflorescence appears the patient experiences a chill followed by a rise of temperature often to 103, 104 or 105. There are severe headache, backache, vomiting or nausea, vertigo, general pains and severe prostration. The patient instead of calling on the physician sends for him.

It must be remembered, however, that patients suffer-



Fig. 2—Large papular syphilide suspected of being smallpox during the prevalence of an epidemic of the latter disease

ing from an attack of smallpox that has been rendered mild through previous vaccination or through a certain degree of natural insusceptibility, often experience but slight initial symptoms. On the other hand, in rare cases, syphilis may produce an initial illness which strongly counterfeits that of smallpox. The following is a case in point:

W. J., a colored man, 24 years of age, developed a chancre about Nov 1, 1901. Thursday, December 26, he was taken sick with fever accompanied by great thirst and heat of skin, severe headaches and general pains. Following this, chilliness, fever and vomiting at night. He stopped work and went to bed on Thursday. Three days later an eruption developed. He rose from his bed January 2 and on the following day presented himself at the skin department of one of our hospitals. At this time he was covered with a profuse eruption consisting of pinhead and larger sized papules. The eruption was most copious on the back. The lesions were apparently at the mouths of hair follicles, and showed slight follicular umbilication in the center. The face showed lesions around the border of the

hair, on the forehead and in the bearded regions. The eruption was also present on the arms above the elbows and on the thighs. None was present on the wrists or hands. On the prepuce was a hard cartilaginous chancre, ulcerated in the center. Smallpox was at once excluded by the fact that the lesions had not developed to the stage indicated by the duration of the eruption.

SUDDEN ERUPTION IN SMALLPOX.

The appearance of the eruption in smallpox is rather sudden. Ordinarily in 48 hours the full complement of lesions is present. In syphilis the eruption may continue to come out for a number of days; in other words, the lesions appear in crops. It must be admitted, however, that in some cases of modified smallpox the appearance of the lesions may, in some cases, be spread over a period of three or four days.

It is stated in a prominent treatise on smallpox that enlargement of the inguinal glands may be regarded as a manifestation pointing to the diagnosis of syphilis. The writer has on many occasions examined the inguinal glands in smallpox with the view to their comparison with those of syphilis. It may be stated that the superficial glands are, as a rule, considerably enlarged in smallpox. The presence of a generalized or localized adenopathy is therefore of little or no diagnostic value.

DISTRIBUTION OF ERUPTION.

The distribution of the variolaform syphilid may be identical with that seen in smallpox. Frequently, however, there are variations observed. The pustular syphilid may involve the trunk more copiously than the face. This would be excessively rare in a well-marked smallpox. The dorsal surfaces of the wrists and hands are nearly always involved in smallpox, but may escape entirely in syphilis. The palms of the hands and the soles of the feet are always involved in severe smallpox. In moderate eruptions they nearly always present some lesions; in mild cases of varioloid they may or may not escape completely. The pustular syphiloderm affects the palmar and plantar surfaces with the greatest rarity. In Case 4 the writer observed a single lesion on the palm of one of the hands. In another case a deep-seated pustule was seen on the lateral surface of the sole of the foot. All writers are agreed as to the great infrequency of the lesions of the pustular syphiloderm on the palms and soles. This is in striking contrast with the papular syphiloderm which commonly involves the palmar and plantar surfaces.

THE CHARACTER OF THE ERUPTION.

In the beginning the eruption may be so nearly identical in the two diseases as to make a diagnosis from this symptom alone quite impossible. It will be noted, however, that the efflorescence of smallpox presents a much greater degree of uniformity, a more uniform development of the lesions over the body than does syphilis. (It should be remembered, however, that the lesions on the face in smallpox are, as a rule, a little in advance of the eruption elsewhere.) Syphilis is characterized by an essentially multiform eruption: it is not uncommon to find small pustules, large pustules and papules interspersed and these in varying stages of evolution and involution. The lesions of syphilis may be grouped in the form of circles or segments of circles, particularly about the border of the hair, the commissures of the mouth, etc. The vesicles and pustules of syphilis are usually conical and involve merely the summits of the elevation. They never become full and globular, filling the entire lesion, as do those of smallpox. The pustules of syphilis may remain small or may

later grow to large size, drying into brownish or greenish crusts. Beneath the crusts considerable ulceration not uncommonly occurs, according as that is slight or severe there will be seen on detachment of the crusts a reddish brown pigmented oval or round stain or an excavated ulcer. The latter heals with the production of depressed scars. The superficial and non-ulcerated pustules frequently exhibit at their base a scaling colarette.

THE COURSE OF THE ERUPTION.

The course of the syphilitic eruption is relatively chronic compared with that of smallpox. The lesions of variola undergo a striking change in a few days. The syphilitic efflorescence is indolent and presents, as a rule, no decided alteration of appearance within this period of time. By the sixth or seventh day in smallpox the lesions develop into these full, round, hemispheric, grayish or yellowish pustules, which are so characteristic of the disease.

Finally, to the physician who has seen much of smallpox, there is a something in the picture, an impression given by the *ensemble*, which, while not definable in language, is nevertheless a subtle aid in the diagnosis. Whenever the diagnosis between syphilis and smallpox is in doubt, observation of the progress of the eruption for a period of 24 or 36 hours will usually make clear the nature of the disease.

DISCUSSION.

DR. W. S. GOTTHEIL, New York—In spite of the distinguishing points to which Dr. Schamberg has called attention, there are occasional cases in which it seems impossible to differentiate syphilis from variola. During a smallpox epidemic that occurred some years ago in New York a number of patients suffering from the disease were sent to the venereal wards of the old Charity Hospital with the diagnosis of lues, the mistake being exactly the opposite to the one here recorded. These cases are often seen only once, and a diagnosis must be made; and in doubtful cases I would place much reliance on the fact that in variola the lesions are all of about the same age and in the same stage of development, while in the pustular syphiloderma there are younger papular efflorescences interspersed with them. In some cases, however, it is quite impossible to make an absolute diagnosis immediately.

DR. A. RAVOGLI, Cincinnati—The point that the distinction between syphilis and smallpox may be made by the history or presence of a chancre can help the diagnosis, but in cases of syphilitics taking smallpox this sign would be of little value. I find that not much attention has been called to the condition of the mucous membranes of the mouth, and this is one of the symptoms on which, when present, I place a great deal of reliance. In smallpox we have lesions of the mucous membranes of the palate, which is especially seen at the time of the prodrome, a few hours before the eruption appears in form of small, reddish points or of small vesicles, scattered over the soft palate. In syphilis we have an entirely different condition of the mucosa of the mouth in form of erythema faucium and mucous patches, which can be considered one of the best characteristics distinguishing between smallpox and syphilis. I have been called in consultation by health officers of small cities or by physicians who had quarreled between themselves, some saying it was a case of smallpox and some saying it was a case of syphilis, and in order to avoid a lawsuit they wanted it decided right away. I have found it rather difficult to decide in so short a time whether it was smallpox or syphilis. The condition of the mucous membranes has sometimes helped me out in those doubtful cases. The fever, too, is a good sign. In syphilis the fever is only accidental and is very mild, but in cases of smallpox usually it is of a more severe type, preceding for a couple of days the eruption, which comes much quicker than any eruption of syphilis.

DR. W. T. CORLETT, Cleveland—I agree with Dr. Ravogli that sometimes to make a differential diagnosis on the spur of

the moment is indeed a difficult task. In two instances within the last six months I have been forced to make a snapshot diagnosis from insufficient data; in both a few hours revealed the error of this practice. In another case the physician in attendance gave the clinical history as follows: The man had been ill four days, had been sick and vomited, had a rise of temperature of four degrees, had irregular pains in his shoulders and back; and there was a distinct eruption, first appearing on the back, and when I saw the patient a few days later it was appearing on the anterior aspect of the body. It appeared to be a typical case of variola, and after studying the case for more than 24 hours we found a new group of vesicles appear. But the eruption was not evanescent, and in a few days slight induration could be detected, when it looked like variola. This was excluded within a few days, and it was not until nearly a fortnight had elapsed that a positive diagnosis of semi-malignant syphilis was made. As Dr. Ravogli has said, the multiform character of the lesions with the tendency to induration at their base is an important feature to take into consideration in making diagnosis.

DR. C. W. ALLEN, New York—I recall a case in which the history and presence of chancre was not present to guide us, but there was an extensive phagedenic ulceration of the prepuce and glans penis that had undermined the skin of the penis up to or almost to the pubes. The nature of this phagedena was not known, but we discovered groups of pustules all over the body, the ears, face and forehead and all over the back. It looked very much like smallpox and there was nothing to show that there had ever been a chancre present. We had suspected that the phagedena was probably of chancroidal origin. We referred the case to the Board of Health, and after a very careful analysis of the case they isolated the man. They did not want to send him to the smallpox hospital that day, but they thought the case was thoroughly suspicious, and they kept him isolated two or three days—it turned out to be syphilis. That was the first eruption the man had had, and the lesions were all pustules, with no multiformity of lesions. They were all of the same nature.

DR. H. W. STELWAGON, Philadelphia—I have met with one instance in which a positive diagnosis between syphilis and smallpox could not be made for a period of nearly three days. This case was also seen by one of our best clinicians; it was seen by a specialist in genito-urinary diseases, and by other physicians, and for almost seventy-two hours not one was willing to venture an absolute opinion, but it turned out to be a case of syphilis.

CONCERNING SOME VACCINAL ERUPTIONS.

HENRY W. STELWAGON, M.D.
PHILADELPHIA.

The discussion which followed this address at the Saratoga meeting was, by an error, omitted last week (THE JOURNAL, November 22, p. 1291). It is as follows:

DISCUSSION.

DR. M. B. HARTZELL, Philadelphia—This subject is one which has been very much neglected. There is no doubt that eruptions of various kinds may follow vaccination, some of them at times serious, perhaps even dangerous to life. I think it would be worth while for those interested in diseases of the skin to study this subject carefully. The whole subject is in a good deal of confusion, and I regret to say that many physicians, as well as the laity, are inclined to regard vaccination as responsible for all sorts of things. Personally, it has seemed to me unscientific that vaccination should be regarded as a cure for anything or a preventive of anything but variola, yet the layman is convinced that vaccination works some change in the blood which alters the susceptibility to diseases of the skin. People have come to me and desired to be vaccinated because they thought it would cleanse their blood. The profession itself is largely to blame for some of these ideas because there are many physicians that either tacitly or in so many words declare that vaccination is responsible for all sorts of things. It has happened frequently that patients have

been referred to me with the statement that their eruptions were due to vaccination, when it was readily shown that vaccination was blameless. I think we owe it to ourselves and the general public to learn just what are the exact facts.

DR. H. G. ANTHONY, Chicago—Of the bullous eruptions which occur after vaccination, I believe that impetigo contagiosa bullosa is one of the most common. Exactly how the disease is contracted, I do not know, but it is most frequently observed where there is the ordinary form of impetigo in the family at the time of vaccination.

I am sure the dermatitis herpetiformis may follow vaccination. Pusey describes an undoubted case. I have observed one in which the patient had repeated attacks; each attack was preceded by severe itching for 24 to 48 hours. The disease was controlled by arsenic in a most remarkable manner.

DR. M. L. HEIDINGSFELD, Cincinnati—I have had some cases of eruption following vaccination and my conclusions have been a little different from those of Dr. Stelwagon. The contents of those bullous eruptions will promptly produce vaccinia, and that in some measure will show that the eruption has some relation to smallpox or variola. As far as I was able to determine these cases of bullous eruption occurred in one of two different ways. They occur either promptly after vaccination, as in ordinary eruptions of different types, or it is the reaction of the system against the intoxication of vaccination.

DR. JAY F. SCHAMBERG, Philadelphia—The allusion of the chairman to vaccinal rashes is most apropos at the present time, owing to the widespread prevalence of smallpox in this and other countries. More vaccinations have probably been performed in the United States within the past two years than in the previous fifteen years. The etiology of vaccinal eruptions is better understood if we regard vaccinia as a mild infectious disease complicated by the presence of a cutaneous wound. Many infectious diseases, such as measles and scarlet fever, are capable of determining the outbreak of an eczema, a psoriasis or some other dermatosis in individuals predisposed to these affections. Vaccinia may act in a similar manner. It is probable that many of the bullous eruptions which occasionally follow vaccinia are due to the accidental introduction into the system of extraneous bacteria or their toxins, which may gain access through the cutaneous wound. There is a tendency, much to be deplored, on the part of physicians as well as laymen, to attribute to vaccination any eruption which may happen to develop after its performance. In many of these cases the eruption manifestly bears no relation to the vaccination save a chronologic one. I have recently seen two patients who each attributed an eruption to a vaccination performed three or four weeks previously. In both instances the eruption proved to be an extensive ringworm which was traced to contact with domestic animals.

DR. A. RAVOGLI, Cincinnati—We find that in the inoculation of the vaccine virus the physician is responsible for the introduction of other morbid germs. At present, as we are using the virus taken directly from the cow, the inoculation of syphilis, together with the vaccine virus, is not so common. I remember many years ago a small localized epidemic of syphilis which had its origin from the inoculation of vaccine virus contaminated with syphilis, taken from a syphilitic child. The most interesting infections to-day are from the different staphylococci and streptococci, which often the patient himself inoculates on the little wound resulting from the vaccination by scratching with his finger nails. Not long ago I was called to see a boy affected with a bullous erysipelas covering nearly the whole body, as the result of vaccination. The boy died in consequence of this erysipelas. In this case we do not have to incriminate the vaccine virus as the factor of the erysipelas, but the accidental inoculation of the streptococci, probably by the boy himself. Many cases of vesicular and bullous eruptions in the form of dermatitis consequent to vaccination have occurred in my practice, which I have considered the result of staphylococcus inoculation. The pustula following the inoculation of the vaccine virus is accompanied with intense itching, and, in order to satisfy the pruritus, children will scratch with their finger nails. The finger nails take quantities of staphylococci from the little wound and scratching in other parts inoculate the pus-producing germs, which cause a form of derma-

titis of the mentioned types. In some cases I have seen reinoculated the vaccine virus through the finger nails in different parts of the body. In a case of an adult he had inoculated the tip of his nose.

In reference to other diseases like psoriasis, etc., I have never had occasion to see cases of the kind following vaccination. I find we have nothing to be afraid of from vaccination if we pay careful attention to aseptis, and enforce rules strictly.

DR. W. T. CORLETT, Cleveland—I think it is of special importance to bring this subject before a body of men such as are here to-day. The public have an idea that almost anything that follows vaccination, whether it comes a few days, weeks or years after, is due to vaccination. We all, in our practice, have had such instances occur. The question that occurs to me is: Do we have more contagious manifestations at the present time with bovine virus than was formerly the case with arm-to-arm vaccination? When I began to practice medicine arm-to-arm vaccination was the rule, whereas the virus is now derived from the cow. So far as my experience goes, mothers bringing in their children and adults presenting themselves with eruptions, eczema or psoriasis, will claim the disease is due to vaccination. Without almost any exception, as far as I am able to find out, there has been no connection between the diseases present and vaccination. In a few instances I have seen a general bullous eruption following vaccination, which I have regarded as the ordinary impetigo. At any rate, I have seen no difference between that and the ordinary impetigo and have so regarded it. There is one point that ought to be brought out. We often produce local effects in vaccination that do not give rise to any serious disease of the skin, but affects the spot locally. This sometimes gives rise to a great deal of apprehension. People oftentimes regard themselves immune from smallpox if they have a large scar, well defined; they think they are well vaccinated. Such vaccination does not prove anything so far as protection against smallpox is concerned. It has given rise to inflammation resulting in ulcer and the principles of vaccine may be entirely absent.

In regard to diseases following vaccination, such as psoriasis, I believe we may have them following vaccination. A woman presented herself at the hospital, who was declined admission on account of psoriasis, but it was found the eruption was caused by the rubbing of her clothing. We do not have psoriasis produced by irritation. I would not regard the process of vaccination as contributory.

DR. C. W. ALLEN, New York—I think a representative body like this should decide a few points in the matter for the guidance of those who are interested from the practitioner's standpoint. One is that we can have a great variety of complications of vaccination in the nature of skin diseases of various kinds which might occur at any other time, vaccination being merely an incident. Aside from those we can have a more or less generalized vaccinia, due to an accidental inoculation by the subject's finger nails carrying the virus to other regions of the body, and generally it is unwise to vaccinate a child who has pre-existing eruption of eczema, impetigo or generalized acute eruption, especially of pruriginous nature like scabies. I have seen multiple vaccinia scattered over the arms, behind the ears, about the face and on various regions of the body, which simply meant that the child had scratched and transferred the vaccinia to those regions. I have been called in consultation to see a man who had an enormously swollen face, with the eye closed and features distorted. The diagnosis was in doubt. Investigation developed the fact that he had taken care of a child that had been vaccinated and had accidentally inoculated himself on the upper lip. It has happened to physicians that they accidentally inoculated themselves on the tip of the nose, and if there is anything you want to avoid doing it is that. It makes an enormous swelling and is one of the worst things that can happen to a self-respecting physician. I saw a physician last year who had accidentally inoculated himself in the eye, in breaking off the tip of the vaccine tube, and he almost lost his sight, while for months he had a terrible time from it. You can imagine what vaccination of the conjunctiva would accomplish. When we are confronted with a

more or less generalized vaccinia-like eruption I think we should admit at the present day from the evidence referred to in the paper that it is a systemic effect of vaccination and that when we have a bullous eruption such as has been described, it is probably true vaccinia. When the American Dermatological Association met in New York a few years ago I took a little child to the meeting to show this form of generalized bullous vaccinia, and many of the members said it was the first instance they had seen. I think we have these three distinct classes of eruptive disease, and then I believe in the first class we may include dermatitis herpetiformis, which, although it resembles impetigo contagiosa, it may also resemble pemphigus, but continuing perhaps for several years, each being preceded by inflammation, a condition of malaise, restlessness, and itching of the skin. These symptoms also relate to dermatitis herpetiformis. I believe that dermatitis herpetiformis may have many causes and vaccination may be one of them.

Dr. E. L. Cocks, New York—I am satisfied that one-tenth of all the cases we see are due to the operator himself, and I am thoroughly convinced after a series of thirty cases of children between the ages of 3 and 9 on whom I was surgically experimenting. I had the arms cleansed with soap and ether, then vaccinated the child, and immediately sealed the wound with collodion. That was kept on until it dried, about half an hour, and then covered with a bandage. The highest temperature I had in those cases was 99 degrees, and on the seventh day I examined the arms. They were all successfully vaccinated and the vesicles were typical in each case. I had not one case of any eruption mentioned here this afternoon. It seems to me if we properly vaccinate the patients that come to us and advise them to take all antiseptic precautions we will not see all sorts of diseases and eruptions as mentioned here this afternoon. But as long as a physician will vaccinate a patient without any precautions at all, taking the needle out of a case, scratching the arm and rubbing in the virus and then letting the patient go before it is dry, we are going to have these manifestations.

THE PLACE AND IMPORTANCE IN THE COLLEGE CURRICULUM OF PHARMACY

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The medical college curriculum is a course of didactic and clinical study laid out by experienced medical men and intended to take the medical student over such work as will best prepare him to enter on the practice of medicine and surgery. Like all plans or outlines intended to guarantee a structure that will withstand the assaults of time they require a proper foundation, and this we may call the preliminary education of the student; then, upon this foundation the medical curriculum should rise with the elementary years in medical schools filled with those broad and ever-broadening basic studies upon which the practice of medicine was founded, and from whose increasing breadth and depth the modern practice of medicine has received its nourishment, and is continuing to receive a daily stimulus.

PRELIMINARY EDUCATION.

The common school education, while never considered broad enough, was formerly thought to be enough for a student to have before entering upon the study of medicine, but as the study of medicine has broadened the better schools have increased their entrance requirements, and a few have demanded college degrees. Leaving out the entrance demands of the various colleges, let us see what the science of medicine and the limits of the better medical schools would require before entering on their work. Thorough drilling on the three R's is demanded before going forward in the com-

mon schools, and their elaboration into the higher literature, logic and composition work, algebra and geometry of the high schools and academies, is preparatory to the study of the more diversified fields of literature, mathematics and natural sciences of the colleges and universities.

No student of modern medicine can deny the necessity for thorough instruction in the use of the English language, a fair knowledge of Latin and preferably a reading knowledge of French and German; that the study of mathematics is of great value in preparing the mind for the higher and deeper studies that require exact and prolonged efforts on the part of the student; that the principles of bacteriology, botany, biology, embryology, chemistry, physics and allied scientific branches are prerequisite before a student can enter intelligently upon the course in the modern medical school. The medical schools and the colleges and universities should come into more intimate relations on these propositions, and thereby insure a better preparation for the future medical students than their predecessors have had, and I believe that that condition will be brought about in the near future.

ELEMENTARY BRANCHES OF THE MEDICAL COURSE

Anatomy, physiology, chemistry and materia medica were formerly and are to-day classed as the elementary studies in a medical curriculum, but witness the subdivision of anatomy into its various normal and pathologic sections, so that its study as a basic subject is now spread over more time than was formerly allotted to the entire course in medicine. Physiology, while it has not been amplified to the same extent as anatomy, has become more intimately united with the clinical side of medicine and has carried several subdivisions of chemistry along with it. Materia medica and chemistry have remained strong and intimate allies and are still going hand in hand.

PHARMACY AND ITS RELATIONS.

Pharmacy or the science of preparing the drugs used in medicine has a chemical basis; pharmacology or the science treating of the action of drugs on the animal economy concedes the action to be due to a chemical union of some type between the drug and the cell elements; therapeutics or the application of drugs in the treatment of pathologic conditions must consider their pharmacy and pharmacology.

The value of the thorough study of these elementary branches and their subdivisions, to one intending to continue the preparation for the practice of medicine and surgery, is as self-evident as the need of a proper foundation for the erection of the modern building, they must be present and in proper position or the student is unable to complete his course, and continues throughout his professional life crippled by incomplete preparation.

Pharmacy is defined as the art or practice of preparing, compounding and dispensing medicines, and more completely by Remington which treats of medicinal substances, comprehending not only a knowledge of medicines and the art of preparing and dispensing them, but also their identification, selection, preservation, combination and analysis. Thus we can see the importance of training the medical student in a science that controls the quality of his drug remedial agents. The pharmacy student needs a more thorough course than the medical student, but the latter should be instructed in the principles of pharmacy and pharmaceutical processes so that he can intelligently order the

use of their products. Pharmacy deals with the origin or source of the drugs; the methods of extraction, purification and preparation of the finished from the crude forms; the chemical and physical properties and the preservation of the crude and finished products; the determination of the strength or the standardization of the finished preparations; and the best methods of combination so that the drugs can be administered with a minimum disturbance to the patient's system and be dissolved for absorption with a minimum delay.

The teaching of this subject in a medical school requires a combination of pharmacist and physician or one who has had a pharmacy education and practice that has subsequently been modified by a medical education and practice, thereby having the faults of the one restrained and corrected by the experience in the other. The average graduate in medicine, who has had a previous training in pharmacy, prescribes with greater ease and accuracy, therefore obtains better therapeutic results than the one without this training. This combination of pharmacist and physician is hard to obtain, yet the departmental head having this in charge should be such an one as I have indicated, and he should be given such assistance and equipment as is necessary to carry out his plans for the instruction. Many of the preparations being chemicals and many, whose chemical structure is not definitely known, having a chemical or decomposing action upon others, makes necessary a knowledge of chemical principles, especially regarding decomposition reactions, thus making chemistry one of the foundations for pharmacy. Most tests for purity, identification, properties, etc., of the drugs are chemical in character. Form, solubility, weight and other physical properties are usually discussed with the chemical.

Physiology and anatomy are related to pharmacy only so far as they may govern the combinations and the size of the dosage according as to the methods of administration. Physiological tests as to strength and purity are increasing in importance owing to the introduction of more definite physiological chemical methods and of the animal and bacterial products as medicinal agents.

Materia medica in its restricted sense is merely the listing of the preparations, giving the medicinal or official name, average adult dosage and properties of the preparations named, thus becoming a branch of pharmacy; but if taken in its older and broader meaning, it includes all of pharmacy, pharmacology and therapeutics.

Pharmacology or the study of the action of drugs upon the animal economy is dependent upon the purity and form of the pharmaceutical preparations, the size of the dose, the place and method of administration, the rate of absorption and the individual reaction of the animal used in the test. Therapeutics or the use of drugs in the treatment of disease is very dependent upon the purity, strength, form and solubility of the drug used and the method of administration.

PHARMACOPEIA.

The pharmacopeia is the list of the official medicinal preparations together with directions for their preparation and tests for their identity, strength and purity. Each country has a pharmacopeia of its own, or has adopted that of some other country as its standard, and in many countries it has been made the legal standard.

The United States Pharmacopeia is revised decennially, this being carried out by a committee appointed by a convention composed of delegates from incorporated medical and pharmaceutical colleges and societies and the

United States Army, Navy and Marine Hospital services. The eighth revision is now in progress by the committee appointed by the convention of 1900. This revision committee is composed of physicians and pharmacists, has complete charge of the collection, arrangement and publication of the pharmacopeia, continuing in existence throughout a term of ten years, during which time it is collecting material for their successors' use in the next revision. The committee is selected because of the experience and capabilities of its members, and they are continually requesting and receiving advice about the various preparations from individual members of each profession. Since the statements in the pharmacopeia are thus founded upon experience and are placed in form after due consideration by the committee, their acceptance by the members of each profession should be complete and in so far as it is possible they should confine themselves to their use. The medical schools should put more stress upon these official preparations and the text that lists them, for the better they are known by the medical graduate the better he will be able to prescribe them and he will get better results from his medication. Fewer worthless drugs or mixtures will be prescribed the nearer the prescriber restricts himself to the list of official preparations. Familiarity or exact knowledge of the armamentarium is required for the successful pursuit of any professional, business or mechanical calling. Drugs are at present a necessary adjunct to the successful treatment of many pathological conditions and therefore the better preparation the physician has in this direction, the better drugs will he prescribe, and so far as drugs are needed in the case, the better results will he obtain. There is no need of the physician knowing all the official preparations, but he must at least have knowledge of the general principles governing each class and special facts about the more important members of each class.

MORE KNOWLEDGE OF PHARMACY NEEDED.

Proper prescribing, from the pharmaceutic point of view, involves consideration of the physical and chemical changes or incompatibilities that may be present, the physiologic or therapeutic incompatibilities being outside the province of pharmacy. Thus we see that the physician must have studied and retained the general principles of chemical decomposition, the chemical composition or constituents of the materials prescribed, the factors that will increase or decrease the rate and character of decompositions that may arise, the solubility in various solvents or menstrua of the drugs used, the taste and local irritability of the components of the prescription.

The physician writes his prescription with the idea of accomplishing certain results, so far as drugs will bring that to pass, and to do this the more definite his drugs are in their composition, the greater freedom from physical and chemical changes due to the combinations ordered, the greater the palatability and solubility of the mixture without a reduction in its required effects, the better will he succeed in his endeavors. Thorough training in the principles of pharmacy will enable the physician to write prescriptions that will fulfill the above requirements, thereby increasing the probabilities of obtaining the results that drug treatment can produce.

The pharmacist or compounder of the prescription should have such knowledge of his calling as to enable him to compound it with due consideration given to the points involved in its writing. Many prescriptions give irregular or imperfect effects because of the pharmacist's

lack of special knowledge required for their compounding so that chemical or physical changes will not be brought about.

The patient expects the physician to be thoroughly competent to write and the pharmacist to compound the prescription for his use, thereby insuring him a better effect and a speedier recovery from his diseased condition. Any pharmaceutical deficiency in the drug selection by the physician, or by the pharmacist in preparing the mixture will serve to decrease its efficiency and thus the patient will not receive the beneficial results he has a right to expect. We therefore can see the importance to all concerned in having a proper pharmaceutical prescription written and compounded.

THE TEMPTATION TO USE PROPRIETARY GOODS.

The examination of any pharmacist's prescription files will soon convince a physician that there is a great deal of imperfect prescribing. Many mixtures are ordered that have such prominent chemical and physical incompatibilities that they can not be combined without so many changes occurring as to render them inert, unpalatable, irritant or in some manner incapable of producing their desired effects. Many that without having a decomposition occur are so unpalatable that they can not be readily administered or after administration be retained and absorbed, whereas a little knowledge of the principles of pharmacy would frequently have enabled the prescriber to add some menstruum that would have decreased, if not completely prevented, the irritation and thereby increased his chances of obtaining the desired effects. The various elixirs, syrups, wines, solutions, etc., of proprietary or semi-proprietary character that are on the market are daily brought to the notice of the profession and the laity by circulars, agents and in the medical and lay publications. They owe their great popularity with the public to the directions so freely given in their advertising and wrapping circulars, thereby obviating the necessity of a consultation fee for the physician. The professional user finds a preparation ready-made for administration that does not require any thought on his part about compatibility or other pharmaceutical properties nor as to their dosage; for has he not been fully supplied with advertising matter describing the careful selection of the drugs, the expert assistance employed in their combination, the therapeutic indications for their use and the size and frequency of the dosage? Not only does the unprepared prescriber find liquid mixtures ready for his use, but all kinds of solid preparations are also awaiting him. No one can deny the valuable service rendered on many occasions by some of these preparations, but the physician who places his chief dependence upon these prescribes by rule and not by reason. He uses a dosage and mixture that is based on general therapeutic indications without being able to make such changes in constituents and their proportionate dosage as the special case would indicate. The free use of this class of pharmaceuticals can, in my estimation, be laid to the ease with which they can be obtained, the less knowledge demanded in their prescribing, the slight knowledge the average prescriber has of pharmacy, and the general tendency to recover from abnormal conditions if nature is not interfered with in too many ways. Just as long as drug therapy proves of value in the treatment of disease it will be a necessary portion of the students' and physicians' course of instruction and the principles that govern the selection and pharmaceutical properties of the drugs are just as important as the knowledge of their dosage and action.

The more exact the preparations can be made the more definite will be their action and they will be more exact the nearer they conform to the official or established lines indicated by the pharmacopeia. The better the instruction given the medical student upon these principles of pharmacy and pharmaceutical practices, the better able he will be to order drugs that can be administered and that will produce the therapeutic effects desirable in the diseased condition.

The fact of so much imperfect prescribing is enough to demand a better instruction in the pure pharmacy of the drugs than has been given in the past in any medical school. The tendency to draw away from this study that is being shown in many medical institutions must be corrected or their graduates will go out less prepared to prescribe drugs than they have been in the past and until we reach the condition in which we can do without drugs, the physician must prescribe them. Prescribing for his patient has always been one of the weakest points in the young physician's preparation for the practice of his profession.

CONCLUSIONS.

1. Better preliminary preparation is required (both general and scientific) than has been the rule for medical students.
2. The study of chemistry, botany and physics should be thorough, especially along the lines of their basic principles, before a student enters upon the medical course itself.
3. The pharmaceutical bearings of chemistry, botany and physics as well as the general principles of pharmacy should be considered during the first year's work in the medical school proper.
4. The next year should present the general application of the principles and practice of pharmacy to the prescribing of drugs, and should preferably be given by a teacher qualified by both pharmaceutical and medical experiences.
5. The clinical or practical year's instruction should not pass over the pharmacy of the drug treatment with a few words, but should give full directions from the pharmaceutical as well as the pharmacologic side of the use of the drug. Whenever drug treatment is indicated it is just as essential to produce beneficial results for the patient as the ability of the physician to diagnose the pathologic condition present, and pharmacy is as essential for therapeutics as pathology for diagnosis.
6. Pharmacy is the basic study that gives the physician the most exact knowledge possible regarding the quality of his drugs, hence should be begun in his earliest student days and continued throughout his entire college course and professional life, unless he becomes an osteopath or a christian scientist.
7. Adherence to the official preparations of the pharmacopeia is desirable and more thorough instruction upon its principles will prove valuable.

THE OUTDOOR TREATMENT OF TUBERCULOSIS.*

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Few medical men will now dispute the fact that our great remedies in the treatment of tuberculosis are pure air, rest and food. The more abundantly the former can be given the greater and faster will be the progress.

* A paper presented at the meeting of the Colorado State Medical Society at Pueblo, June 24-26, 1902.

towards recovery. Pure air in greatest abundance can best be secured by tent life. It is a pleasure to witness the rapid improvement when this mode of life is inaugurated. The sleep becomes more restful and refreshing, the appetite is improved and the vigor and vitality greatly increased.

Tent life does not mean or should not mean roughing it, as many suppose. The same watchful care should be exercised, as good food given, as comfortable a bed, as much rest, as would be obtained in the most luxurious home or the best equipped closed sanitarium. The unfortunate results arising from mistaken notions in this regard has been most forcibly emphasized by a case recently coming under my observation. A young man with rapidly developing tuberculosis, rapid emaciation, daily fever, with little appetite and little strength, was advised by his physician to come west. He was told to get a tent and a horse and rough it. He was advised to cook his own food and to take care of himself and of his horse whether he liked it or not. He graphically described his experience, and were not the results so serious they would have been amusing. He said: "I had never been on a horse but once in my life. I lifted a heavy saddle on and off several times a day, hauled away at the cinch band, fought to get the bit in, chopped bales of hay and straw, carried pails of water, etc. In consequence I had the most horribly strained right lung and shoulder on earth. The temperature went up to 104 and the pulse 118."

A tubercular patient with little appetite, with little strength, with progressive emaciation and fever, is in no condition whatever to rough it or to take care of himself. Indeed, it should now be recognized as a cardinal principle that a tubercular patient in such condition should be given rest and quiet instead of exercise, and if the temperature is high the rest should be absolute. Not infrequently people are sent from the east to a high altitude and are advised to take little or no medicine, but to depend on fresh air and exercise. The advice should be for fresh air and no exercise until the patient becomes acclimated or until the fever has subsided, if present.

The idea of tent life has so long been identified with roughing it, with hardship and inconvenience and so many physicians still cling to the thought that the strenuous life of the camper is a part of the treatment that it is often difficult to impress any other idea. The hardships and the inconvenience of tent life where one is obliged to do all the work and to care for himself is often distasteful and irksome to a perfectly well and strong individual, but to the invalid with little strength, with no appetite and with fever, such a life is positively most injurious. While advising tent life as the means of obtaining the greatest amount of pure fresh air, yet we would advise with it and as a part of the treatment, food, rest and comfort. To insure the best results those who take up tent life should do so under careful medical supervision in order that the amount of exercise, as well as the food and medication, may be regulated according to the needs and the condition of the patient.

Instead of large closed sanitarium I have long been convinced that the outdoor treatment of tuberculosis as represented by tent life, so arranged as to give every comfort, and every facility that might be obtained in the best equipped closed sanitarium would be the means of saving a far larger proportion of our tubercular patients. The best results will be obtained in that climate that will permit of sleeping in a tent the year round. We should preferably select a climate with sufficient altitude,

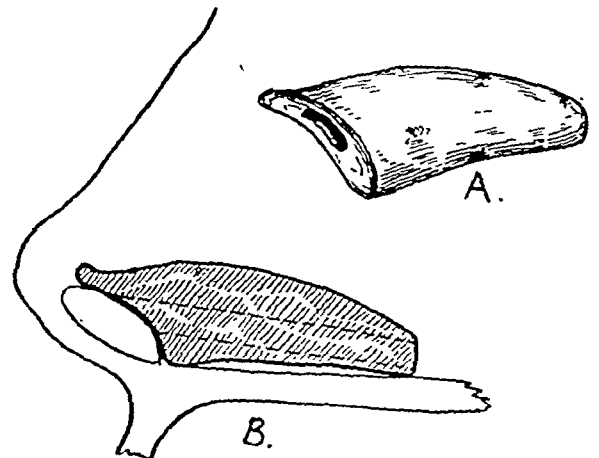
with dryness, uniformity of temperature, and of sufficient mildness to permit of a practically outdoor life night and day during the whole year. Many such localities can be found in New Mexico and among the foothills of Arizona. The climate of Colorado is too rigorous for an outdoor life during the winter season, but many patients sleep in tents here from the early summer until October, and some even as late as December, with the greatest benefit. The winters of Colorado are too severe for the majority of tubercular cases and the summers of New Mexico and Arizona are too hot and uncomfortable for the best welfare of these cases unless they flee from the arid plains to the mountains during this season. I am convinced that the best results are obtained by shifting these patients about, allowing them to take up their residence and outdoor life in Colorado during the summer season and permitting them to spend the winters in the same manner in Arizona or New Mexico.

A CORK NASAL SPLINT.

HAROLD WILSON, M.D.

DETROIT.

The ordinary Asch or Mayer hard rubber splint used after operations on the nasal septum is by no means a comfortable thing to wear. Its anterior lower edge projects conspicuously,



A. The splint. B. Diagrammatic section of nose, showing splint in place. Observe the angle (140 degrees), which the anterior face of splint makes with the nasal floor.

while its upper edge, by its constant pressure, generally makes the tip of the nose very tender and painful. Some metallic splints I have seen are cleverly contrived, but the patient is unpleasantly conscious of their weight, and I am not sure but they have a tendency to fall out of the nose. Cork seems to offer, by its lightness and elasticity, some decided advantages, and I have made and used some splints of this material which have proved very satisfactory. The surgeon may make them for himself, with the aid of a sharp knife, a file and some sandpaper. A hole is bored through a piece of cork of proper size by means of a perforator, and the splint is shaped to suit the needs of the individual case. After the splint is shaped, it is dropped into hot melted paraffin, which both sterilizes it and fills up the numerous inequalities in its surface, so that it does not absorb the nasal secretions and its cleansing is easy. It will be noticed by the figure that the splint, when in place, is completely within the nasal cavity. Owing to this, as well as to its color, it may be worn without being conspicuous. Moreover, its lightness makes it very comfortable for the patient, and the tip of the nose does not become sore from pressure.

32 West Adams Avenue.

COMPASSION and timidity are mistaken kindness at the first dressing of the ordinary fracture of the lower end of the radius.—Roberts.

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THE INTERRELATION OF CELLS AND ORGANS.

Studies of the typical internal secretions of glands, and of the career of foodstuffs in the many changes they undergo before completing the round of metabolism, have made general the knowledge of the interdependence of the organs, and for that matter of the cells, on each other. It is because of this interdependence that a failure on the part of one group of cells often leads to changes in a remote group, the results of which may overshadow the results from the original lesions. Likewise, the "vicious circle" may be developed by the failure of one sort of metabolic change throwing an entirely different but dependent process out of action, which in turn interferes with the already abnormal process that first became disordered. Such examples of interdependence are rather obscure and indefinite to serve as illustrations of an important principle, and perhaps more simple and interesting examples are furnished in the case of secretions that are by themselves inactive and that require another secretion to render them capable of performing the functions for which they are intended. Pepsin is a case in point, and a familiar one. By itself it is perfectly inert, and will not attack proteids in the slightest degree; but combined with another secretion of the gastric mucosa, hydrochloric acid, which is as characteristic a secretion of that organ as the pepsin itself, the "pepsin-hydrochloric-acid" so formed performs the digestive functions of the stomach. Here we have to do with two secretions produced by one organ which have no function alone, but must be combined to produce the most characteristic effect of that organ. More remarkable, even, is the case of one organ forming the substance necessary for the completion of an active secretion of another organ, but this relation is undoubtedly true of the pancreas, the spleen and the intestinal mucosa.

Many years ago Schiff corroborated the observations of earlier experimenters that the extract of the pancreas of fasting animals does not have much if any power of digesting proteids, although just as capable of digesting starches and splitting fats as in feeding animals. But the extract of a pancreas removed while gastric digestion is at its height will be found possessed of a considerable degree of proteolytic power. Schiff connected this increased tryptic activity of the pancreas with the synchronous enlargement of the spleen, and by experiment soon found that splenectomy prevented the

development of tryptic activity even during digestion; the same effect was obtained by preventing the spleen from dilating as it normally does during digestion. More recently this important work has received delayed attention, and it has been corroborated in full as well as amplified. L. B. Mendel and L. F. Rettger¹ have found that while extracts of the spleen, or defibrinated blood from the splenic vein increase the proteolytic power of the pancreas, this power is lost by boiling the extract. This, of course, suggests that the active substance may be an enzyme, an idea which is supported by the observation that the alcoholic precipitate of active splenic extract contains the substance in a condition soluble in water, a behavior usual with enzymes. So it may be permissible for us to ascribe to the spleen a direct part in digestion, consisting of the production of an enzyme or similar body that converts the inactive "trypsinogen" of the pancreas into trypsin, this activating agent being discharged from the spleen during the congestion that accompanies gastric digestion.

But of how much importance is this function, interesting as it is, as a disclosure of one of the "mysteries of the spleen?" No particular digestive disturbance has been observed after splenectomy in man, and the more systematic studies in lower animals have shown that the intestinal proteolysis is undisturbed after removal of the spleen. Even in dogs, whose stomach has been isolated from the alimentary tract after splenectomy, thus leaving all of the digestion to the intestines without aid of stomach or pancreas, the digestion of meat is accomplished quite satisfactorily. How does the inert trypsinogen of the pancreas become transformed into trypsin in this case? The workers in Pawlow's laboratory in Russia, among many other valuable contributions to our knowledge of digestion of foods, have determined the presence in the intestinal juice and in extracts of the intestinal mucosa of a substance with properties that indicate that it is an enzyme, which has much the same effect on inactive fresh extracts of the pancreas as do the extracts of the spleen. This substance they have called *enterokinase*.² As a matter of fact, this intestinal energizer of the proteolytic enzyme of pancreatic juice seems to be much more active than the splenic extracts, and probably plays a more important part in normal digestion. We find, therefore, that the pancreatic trypsinogen is made active in the gland itself by substances brought to the gland in the blood from the spleen, and also that any inert trypsinogen that passes into the intestine is there activated by the enterokinase. The value of this arrangement seems to depend on the fact that the fat-splitting and starch-digesting enzymes of the pancreatic juice are destroyed very readily by the pro-

1. American Journal of Physiology, 1902, vii, 387.

2. P. Borissow presents a review of the work in Pawlow's laboratories in International Clinics, 1902, 12th series, vols. II and III, 274 and 247. An English translation, by W. H. Thompson, of Pawlow's Lectures on the Digestive Glands, has just been issued by Lippincott. It should be read by those who wish to appreciate the character of the experimental work that is being done in the study of the physiology of digestion.

teid-splitting enzyme, so that if the pancreatic juice were actively proteolytic from the start it would not accomplish much digestion of the other varieties of food-stuffs. Now the Russians have shown that on a meat diet the fresh pancreatic juice contains nearly all of its trypsin in the active form, probably made so by intrapancreatic action of the "enzyme" from the spleen; whereas, with a bread diet, in which the spleen becomes much less congested, the juice, as elaborated into the pancreatic ducts, contains much more of the inactive trypsinogen, and is correspondingly less actively proteolytic. This gives the starch-digesting and fat-splitting enzymes an opportunity to act for a while without injury by the trypsin, since it requires some little time for the enterokinase to be secreted and to convert the trypsinogen into trypsin. This complicated arrangement produces, therefore, an ideal result; an actively proteolytic fluid with proteid diet, and an actively amylolytic and lipolytic juice with a starchy or fatty diet.

Interesting and valuable as these results are, it may well be that their greatest importance is to be sought in future researches that they may incite. May it not be that many of the organs whose functions are still unknown have a very important purpose to perform in combining with the output of some other organ? Such a function could have been readily overlooked in the lack of any facts calling attention to this possibility. May not even the bothersome vermiform appendix have its own particular effect on the secretions of the rest of the alimentary canal, and be like the splenic function, valuable but not essential, and so not detected after simple appendectomy? A host of other possibilities arise to mind quickly enough, which might lead to studies of correlated action in numbers magnified by combinations and permutations toward the infinite.

SETTLEMENT WORK AND HYGIENE.

Under the name of settlement work there has come in most of our large cities in recent years an organized effort to bring at least some of the better educated classes, mostly young university men and women, into personal contact with the very poor and the ignorant in the tenement-house districts. Modern great city life, especially in this country, has brought almost absolute separation of the classes. In certain of the great cities abroad it still sometimes happens that the houses facing on the street and those on the courtyard of a square may shelter widely-separated members of the social scale, but this is practically never the case in the United States. This separation deprives the poor and ignorant of one of their most effective influences for cleanliness and hygienic living, the example of those whom they look up to and whom they respect. This is unfortunate, since example, especially in such matters, counts for so much more than precept. Any means, then, that promises to undo, even to a slight extent, the evil of present conditions should be heartily welcomed.

We have come to realize of late years that there is a much more intimate relation between the health of the poor and of the well-to-do in a large city than has been hitherto thought. The tenement can not be kept from affecting the life of the mansion. Disease is not merely the consequence of overcrowding and dirt, but it may be conveyed even to those in the best sanitary circumstances if once allowed to gain a foothold that intensifies its original virulence. Disease germs are much less frequently conveyed through the air than used to be imagined, but modes of transmission are sure not to be lacking if once favorable conditions for the multiplication of specific micro-organisms are established. There is an inevitable solidarity between the different parts of a city in the matter of health and those who are interested in humanitarian progress thoroughly appreciate this fact.

There is every reason, then, for physicians to take an active interest in settlement work, and especially to see that those who devote themselves to this social uplifting shall be properly instructed and possessed of rational ideas on questions of hygiene and sanitation. It not infrequently happens that those whose characters prompt them to such altruistic occupations are not entirely in accord with modern scientific medical notions. The anti-vivisectionists, anti-vaccinationists, and many other "antis" find in such work a favorable opportunity for the propagation of their ideas. Needless to say, they may in this way do great harm. If medical students looking for congenial occupation during vacations can be directed to this kind of work in addition to attendance at dispensaries, there is undoubtedly a great field for good. Physicians should realize the possibilities there are in this matter, now that settlement work is becoming a recognized institution of great city life. We have noted with approval that in more than one of the large cities women physicians have interested themselves in such work, and are even the heads of institutions. Male physicians are not so prominent, and it would almost seem that an opportunity for the noblest professional work, one calculated to be of supreme philanthropic importance, is being neglected.

SPLENIC ANEMIA.

The condition of enlargement of the spleen with anemia has attracted a good deal of attention within recent years. It has been given a number of different names and no doubt different affections have been described under the same name. Despite the careful study to which the disorder has been subjected there is no unanimity of opinion as to its nature and origin. Osler defines the affection as a special malady of unknown etiology, characterized by a chronic course, enlargement of the spleen, anemia of a secondary type, a marked tendency to hemorrhage from the stomach and a liability to be associated in the late stages with jaundice, cirrhosis of the liver and ascites. He considers it probable that the conditions described separately in the lit-

erature as primitive splenomegaly, splenic anemia and splenomegalic cirrhosis of the liver or Banti's disease, are stages of one and the same malady.

In a recent paper on the subject, Osler¹ reports a group of cases and gives the results of their analysis, together with that of a series of cases communicated to him by his fellow-members of the Association of American Physicians, and concluding with a summary of the clinical features of the disease. Of 15 cases under Osler's observation, 13 occurred in males and 2 in females. All were in adults, chiefly young adults; in only one had the disease begun in childhood. From the etiologic standpoint there was in five a history of malarial fever earlier in life. Heredity played no part in any of the cases, although a familial relation was noted in some cases reported by others. The peculiar characteristic of the disorder is its extraordinary chronicity, some of the cases lasting more than 12 years and the duration in two of the reported cases being 25 years.

The special feature of the enlarged spleen of chronic splenic anemia is its great size—being greater than in any other disease, with the exception, perhaps, of leukemia. Hematemesis is a remarkable symptom of the disorder, being present in a considerable percentage of the cases and attaining large proportions at times. It may continue throughout many years, and it is believed to be due in a large number of cases to conditions associated with enlargement of the spleen. Hemorrhage from other sources is much less frequent. Epistaxis may recur at intervals; retinal hemorrhages, bleeding from the gums, menorrhagia and hematuria have been recorded, and purpuric attacks may occur. The state of the blood is peculiar, there being but a slight diminution in the number of red corpuscles, with a low percentage of hemoglobin and also a small number of leucocytes. Pigmentation of the skin is common in cases of long standing, often assuming a diffuse bronzing, although at times it appears as a steel-gray staining, while in some it has been patchy and associated with areas of leukoderma. In most cases there are no symptoms referable to the liver; in a few ascites is present; while in others symptoms suggestive of cirrhosis of the liver dominate the clinical picture. Jaundice has been observed occasionally. Often the liver is normal in size; at times it is enlarged; rarely it is diminished in size. The morbid anatomy of the affection comprises a fibrosis and hyperplasia with atrophy of the splenic pulp and a hyaline degeneration of the Malpighian bodies; and also displacement of the normal texture by fibrous tissue and large endothelial cells with clear protoplasm containing two or more nuclei, and among them giant cells.

The disorder appears to be dependent on a chronic toxic rather than an infective process, but the character and the source of the poison are as yet undiscovered. The only known successful treatment consists in removal of the enlarged spleen.

WELTMERISM AGAIN.

Some time ago the Postmaster General excluded the Weltmer magnetic healing concern of Nevada, Missouri, from postal privileges and an appeal to the courts sustained the order. The United States Supreme Court has now overruled the decision of the lower tribunals, thus restoring to the pretenders the use of the mails. According to the press reports, which are all we have at present, the decision makes a general ruling as regards the rights of medical healing pretenders to the use of the mails. It says, as reported, in effect that however extravagant the claims that are made no one can set the limit where the statutes are violated. "There is no exact standard of absolute truth by which to prove the assertion false and a fraud."

This seems to us rather a broad statement, for there must be some difference between the truth and a lie. As we recollect it, this Weltmer concern not only claimed to cure by correspondence, but also had a pretended system of aiding its dupes in money-getting by absent treatment or influence, or something of that sort. The postal authorities were convinced of the fraudulent nature of the business by the absolute lack of correspondence between Weltmer's claims and the amount of business done. It was an absolute impossibility for a man to give any individual attention to the cases represented in his correspondence, which kept some eighty typewriters busy, without any relation whatever to the question of the truth or falsity of so-called magnetic healing. The case was not improved for him by the alleged fact that while his typewriters were copying off the forms to send to his dupes he was refreshing himself in Colorado and could have no knowledge of even the names of the 25,000 or more whose communications with him were stopped. We do not know how the case was presented to the court, and it may be that this aspect was not made very prominent, but if it was the decision and remarks on magnetic healing and its possible validity seem to be rather gratuitous.

We would ordinarily hesitate in criticising a decision of the Supreme Court, but this one appears to us to be a judicial blunder. Judges and other laymen often give out queer opinions on medical matters, but good business sense ought to be enough to make clear the fraudulency of such a pretender as Weltmer. The opinion, however, does not seem to be final as to all points, and it may be only a temporary victory for the concern, but what is published of this extraordinary decision does not commend itself, even to the editors of the leading lay journals of the country as we see by their editorial comments on the case.

A NEW FIELD FOR EDDYISM.

Weltmer does not seem to be the only one who claims power to make rich as well as to heal. We read of a certain Prof. William Windsor of the "International College of Science" of Boston, who goes around lectur-

1. American Journal of the Medical Sciences, November, 1902, p. 751.

ing on "vitosophy," a science that not only can cure all diseases except those which require surgical aid, but will also make those who master it rich and happy. Eddyism and Dowieism will have now to add worldly wealth to their other inducements or they will be behind the times. "How to make one rich" would be a very good text for either Dowie or Mrs. Eddy—they can speak from experience—but how about the many?

MILK AND PUBLIC HEALTH.

The subject of milk in its relations to public health is very thoroughly discussed in a recent report by Dr. George M. Kober and published as Senate Document No. 441. The larger part of the work is taken up by the various appendices, which give the composition of normal milk and its legitimate variations, its adulteration with preservatives, etc., the methods of milk inspection and examination, chemical and bacteriologic; the details of sanitary dairy management and other matters that are of interest in regard to this most important food product. There is also an exhaustive bibliography. The subject of abnormal milk is fully treated, including a discussion of the living question of the day—the transmission of bovine tuberculosis by milk. The author still considers this question to some degree an open one, requiring further and careful investigation before we can speak positively as to the full extent of the danger from this source. He agrees, however, that there is already sufficient evidence to warrant all reasonable precautions. The document concludes with a tabulated statement of disease epidemics, typhoid, scarlatina and diphtheria, that have been credited to the milk supply, and a good index. It is the most convenient and complete monograph of its subject that we have yet seen and deserves a wide circulation. We are not sure how generally accessible it is or will be to the general public as a government document, and its republication, with such additions and revision as the studies of the subject may make necessary, might be advisable.

THE SCIENTIFIC EXHIBIT.

We print this week¹ the report of the Committee on Pathologic Exhibit at the Saratoga meeting. This exhibit has now been a feature of the annual sessions of the American Medical Association for three successive years and has attracted a great deal of attention. Being in the beginning stage it naturally has been open to some criticism. That it has lacked definiteness of purpose, and that the best possible use of the material has not been had, is not to be wondered at. Now the scope of the exhibit has been broadened, as is shown by the change of title from Pathologic Exhibit to Scientific Exhibit, and at the last session of the House of Delegates arranged for co-operation on the part of the sections with the committee arranging the exhibit. Would not the value of the exhibit be materially increased if the secretaries of the sections could secure for the exhibit all specimens that are to be used, or that could be used, for the illustration of the papers that are to be read in their sections? Furthermore, would it not add

to the general interest if specimens illustrating present or past research could be shown in considerable numbers in this exhibit? Last year the Section on Ophthalmology had a display of ophthalmoscopes, showing the various steps in the evolution of this instrument. No better place for such a display could be conceived than this exhibit. Would it not be a good idea to institute demonstrations of specimens by men who are especially capable of conducting such demonstrations? For example, suppose that during each afternoon certain men be selected to talk on the specimens that they might care to demonstrate. Thus, the Section on Ophthalmology might ask some scientist to talk on the eye specimens that are on exhibit. That on Dermatology might ask for a similar demonstration by some distinguished skin specialist. This plan would, on the one hand, materially increase the usefulness of the exhibit, while, on the other, it would tend to secure a high grade of specimens.

THE PLAGUE IN CALIFORNIA.

A certain portion of the California press is still raving and maintaining that there is and has been no bubonic plague in that state; this, too, in spite of the convincing evidence that seems at last to have silenced the sole local medical journal hitherto advocating their views. They do not appear to be aware that the country generally does not accept the testimony of such sanitary experts as Governor Gage, Mayor Schmitz and bacteriologist Mouser against that of all other authorities in the country and the almost unanimous opinion expressed by the California State Medical Society. If this course is kept up we will probably see some states quarantining again California—indeed, that is already threatened. The country does not fear the plague so much as long as it knows that the city health authorities of San Francisco are still in power and are permitted to do their duty. But this is not a full assurance of safety so long as it is certain that the state authorities will not co-operate but will continue their policy of the past, denying the existence of the pest and doing nothing to curb it. There is no certainty that it does not exist unrecognized elsewhere in the state in places where there are no adequate health regulations or sanitary officials. The Chinese are numerous throughout California and are very secretive in such matters. Their success in hiding plague cases was shown in Hong Kong, where, in spite of all official vigilance, they were often only revealed after death when the bodies were thrown into the streets. What may happen in remote Chinese settlements on the Pacific coast no one knows. Our hopes rest on the incoming administration, which we feel assured will not follow the example of its predecessor. With state and city authorities of the coast alike alive to the needs of the situation, the rest of the country will feel grateful relief from the unpleasant suspense that now exists. While *THE JOURNAL* has discontinued its special detailed reports of plague cases for some time, they have continued to occur latterly at the rate of at least eight or ten a month, and seem to be increasing. In the meantime the attitude of some of the citizens and

1. See page 1404.

officials is more interesting psychologically than it is satisfactory in other respects. It is not pleasant to think of bubonic plague becoming endemic, even if it does not become epidemic in this country.

Medical News.

COLORADO.

Personal.—Dr. W. C. Foster, Pueblo, as the result of a competitive examination, has been appointed city physician of Manila, P. I.

Without License.—"Dr." J. C. Maroney, Denver, was tried, November 18, on the charge of practicing medicine without a license. He was found guilty and sentenced to pay a fine of \$200 and to ten days' imprisonment in the county jail. The jail sentence was waived on payment of the fine.

New Home for Consumptives.—The Mrs. Charles L. Adams Memorial Home, Denver, built at a cost of \$50,000 by Mr. Charles Adams of New York, in memory of his wife, and intended for consumptives of limited means, was dedicated, November 26, with appropriate ceremonies, by Bishop Olmsted of Colorado. The institution has accommodation for forty patients.

Death and Disease in October.—During the month 802 deaths and 27 stillbirths were reported, an annual death rate of 16.26 per 1000. Diphtheria caused 18 deaths, scarlet fever 4, smallpox 1, and typhoid fever 83. The cases of diphtheria reported numbered 107, of scarlet fever 112, of smallpox 25, and of typhoid fever 655. Compared with the previous month the reports show an increase of 38 cases of diphtheria, 52 cases of scarlet fever, 3 cases of smallpox and 13 cases of typhoid fever.

An Ethical Question.—At the bi-monthly meeting of the Pueblo County Medical Society, held November 18, questions of professional ethics were discussed, and the action of Dr. Richard W. Corwin in allowing his picture to appear in the daily papers in connection with his recent performance of the Lorenz operation for the cure of congenital hip dislocation was given consideration. The local newspapers say that while no resolution was passed on the subject members of the society, with some exceptions, expressed their disapproval of this sort of publicity.

ILLINOIS.

Expectoration Prohibited on Sidewalks.—A resolution was passed by the Springfield Board of Health, November 11, prohibiting expectoration on sidewalks and in public places.

Hospital Fireproof.—The new Rockford Hospital is to be made fireproof, and in connection with the hospital a nurses' home will be erected. The total cost of the building will be \$53,000.

St. Charles Hospital Open.—The new St. Charles Hospital was dedicated by Bishop Muldoon, November 25. It was founded by the Franciscan Sisters of Joliet and represents an outlay of \$50,000. It will soon be ready to receive patients.

Neely Appointed.—President Hanberg of the county board, on November 24, appointed Dr. John R. Neely superintendent of the county institutions at Dunning. The appointment is to take effect at once. Dr. Neely has been medical director of the institution for some time.

Personal.—Dr. Harry R. Lemen, Upper Alton, has returned home after three years in the United States service in the Philippine Islands.—Drs. M. D. Empson, Hartford, and James W. Armstrong, Centralia, were elected vice-presidents of the Southern Illinois Medical Association at its recent meeting.

Public Advertisement Undesirable.—A committee of physicians representing the Quincy and Adams county medical societies, called on the newspapers of Quincy, November 18, and requested them not to publish the names of physicians connected with cases which from day to day come up, and in which the public is interested.

Chicago.

Personal.—Dr. and Mrs. G. Frank Lydston have returned from the Orient.

Degree for Dr. Lorenz.—On November 28, Northwestern University conferred the degree of LL.D. on Dr. Adolf Lorenz of Vienna.

Will Protect Its Members.—The Chicago Medical Society, acting on the recommendation of a committee, has decided that hereafter all suits for malpractice brought against its members

will be contested by counsel provided by the society. Under the proposed plan a medicolegal committee and a medicolegal fund will be established.

Importance of Diagnosis in Diphtheria.—From the Bulletin of the Chicago Health Department for the week ending November 22 we quote the following:

Investigations of the deaths from diphtheria show that many of them were due to a deceptive type of the disease. Parents and some physicians even have been deceived when the most malignant form of the disease was present and death has ensued because the administration of antitoxin was thereby delayed. All persons having the care of children should keep in mind that the disease may be in the back part of the nose or in the windpipe, as well as in the throat, where the membrane can be seen. There may be little or no pain or fever and on the second day the child may seem better. The poison of the disease often causes dulness and stupor. Hoarseness and difficult breathing indicate diphtheria of the windpipe. The true nature of the disease can only be learned by taking a culture, and, when there are so many of these cases present as now, this should never be omitted. Antitoxin should be administered at once in every suspicious throat case; it can do no possible harm in any event; it will certainly prevent death from diphtheria if used within the first forty-eight hours.

The laboratory examinations show some decrease in the presence of the diphtheria bacillus; it was found in less than 50 per cent. of the cultures examined. The week before it was present in more than 60 per cent. of the cultures, but it was found more frequently last week in cases not suspected to be diphtheria.

SMALLPOX.

There were six cases of smallpox admitted to the isolation hospital during the week—two from Evanston direct, three children attending a parochial school in Evanston but living near the northern city limits, and a travelling man who contracted the disease probably in Milwaukee. None of these had ever been vaccinated. At the close of the week there were 11 cases remaining in the isolation hospital, 7 having been discharged recovered, and no deaths.

LOW NOVEMBER MORTALITY.

Notwithstanding the threatening indications of a high death-rate during the early part of the month, November bids fair to maintain its position of lowest monthly death-rate of the year. The 1,437 deaths reported during the first twenty-two days represent an annual rate of 13.09 per 1,000 of population. This is nearly 20 per cent. less than the average November rate during the decade 1881-1890, and 9.1 per cent. less than the average November rate during the decade 1891-1900.

INDIANA.

Deaths From Violence.—Of the 2559 deaths in Indiana in October, 146, or about 5 per cent., were due to violence. Rail road and street car accidents caused the deaths of 32 persons, of whom 26 were males and 6 females. Of the 146, 118 were accidental and 26 were suicides, of which 21 were males and 5 females. There were 8 murders, 7 were accidentally poisoned, and 7 drowned, 4 killed by machinery, 17 by burns and scalds, and 11 died of gunshot wounds. Five persons died of strangulation from food. Six persons chose hanging, 7 shooting, 3 carbolic acid, 2 morphin, and 2 arsenic as a means of committing suicide, and paris green, rat poison, strangulation and prussic acid each killed one.

MASSACHUSETTS.

Endows Chair of Comparative Anatomy.—James Stillman, president of the National City Bank, New York, has presented \$100,000 to Harvard University for the endowment of a professorship in comparative anatomy.

Practicing Without License.—William L. Williamson, Taunton, who claims that he has been practicing in that city for ten years, and that he has been in practice for more than thirty years, has been brought before the District Court charged with practicing medicine without being qualified under the Massachusetts law. The name of this individual is not to be found in the medical directories.

Harvard Tuition Fees Advanced.—The corporation of the Harvard Medical School has approved the vote of the faculty to raise the tuition for the fourth year from \$100 to \$200, making the fees uniform through the four years. When only three years were required for a degree, the fourth year tuition was made less to encourage students to take it, but now that the requirements are for four years of study, the change is made in the interests of uniformity.

NEW YORK.

Personal.—Dr. John F. Fitz Gerald, superintendent of the Rome State Custodial Asylum, has resigned to accept the position of general medical superintendent of the Kings County General Hospitals, four in number, in Brooklyn.—Dr. John D. Curran of the staff of the Binghamton State Hospital, has resigned, and will go into private practice.

Status of Medical Examiners Decided.—By a ruling of the State Civil Service Commission, the positions of county medical examiner and assistant medical examiner are exempt from the civil service law. The salaries due to Medical Examiners

Danser and Assistant Medical Examiner Howland of Erie County, which have been held back awaiting the decision, have accordingly paid them from the date of their appointment.

Smallpox Emergency Fund.—The Board of Estimate and Apportionment of Rochester has adopted resolutions appropriating another smallpox emergency fund of \$25,000. The \$50,000 fund appropriated some time ago is exhausted. Of the new fund about \$10,000 is to be applied to building the new hospital and the remainder is to be used for the care of smallpox patients. It is expected that the additional appropriation will be sufficient at least for the remainder of the year.

New York City.

Physician Assaulted.—Dr. Simon Glug, while on his way home at 3 o'clock in the morning, was assaulted by three men, one of whom was captured and identified.

Generous Gift to Hebrew Charity.—The six daughters of the late Leonard Lewisoohn have donated to the Hebrew Sheltering Guardian Society the sum of \$125,000, \$50,000 being given outright, and the balance on the condition that the society shall secure a similar amount to complete the building fund within a year. The entire amount needed is \$400,000, of which \$110,000 have been already subscribed.

The New French Hospital.—The ceremony of laying the cornerstone of the new French Hospital took place, November 18, in the presence of many distinguished persons, including the French ambassador, M. Jules Cambon. The new edifice is to be erected a little west of the present site of the hospital. The new building will have 150 ward beds and some private rooms, and while intended principally for French people, the hospital is non-sectarian and all nationalities will be admitted.

Throat Department Closed.—The directors of this institution have finally decided to close the throat department of the New York Eye and Ear Infirmary, which has been in existence for 28 years. Last year alone it treated 9600 new patients. A limited number of the old throat patients will continue to receive treatment, but retrenchment has been found necessary because, it is said, of the enormous crowds of school children brought daily to the infirmary for the treatment of trachoma. To offset the unpleasant rumors that have been abroad regarding disagreements with the physicians in the throat department, the directors reappointed the whole staff for another year.

Preparing for the Lorenz Visit.—Up to date, several hundred applications for treatment by Dr. Lorenz have been recorded at the Cornell Medical College and at the Hospital for Ruptured and Crippled, and to facilitate the work of selection a large number of the cases have been examined with the x-ray. Incidentally this excitement among the deformed persons in the community has been the means of bringing to light a surprisingly large number of cripples, and this has led Dr. Newton M. Shaffer, and others, to start a movement to ask the next legislature to appropriate \$100,000 for a new and more capacious hospital for the care of such children. The present state hospital for this purpose is situated at Tarrytown, and accommodates only 25 patients. Dr. Lorenz is expected to reach this city December 6.

An Unlicensed Drug Clerk.—An unlicensed junior clerk in a drug store on Ninth Avenue recently sold a mixture of castor oil and almond oil to some children. They returned shortly afterward, complaining that their grandmother said the medicine was not right, as she could smell no almond oil in it. The clerk said he would fix it, and evidently did so by adding a liberal quantity of oil of bitter almond, for shortly afterward the grandmother and one child were dead from cyanid poisoning. The proprietor of the store, when asked by the coroner why he allowed so inexperienced a clerk to handle poisons, replied as follows: "He was not allowed to fill prescriptions. A mixture of castor oil and almond oil is not a prescription. He had as much right to sell it as he had to sell patent medicine."

Opposition to Coroners.—At the last meeting of the New York County Medical Association, a resolution was introduced by Dr. Harry R. Purdy, and unanimously adopted, directing the appointment of a committee to investigate the question of abolishing the archaic office of coroner. The committee appointed consists of Dr. Stephen Smith, chairman, with Drs. E. Eliot Harris and Harry R. Purdy as his associates. This committee will co-operate with the committee on legislation of the state association, and it is probable that the county medical society will appoint a similar committee. It is the intention to introduce into the next legislature a bill abolishing the office of coroner in New York City, giving the medical part of the work to some officer chosen by the president of the board of

health, while the judicial part of the work of the coroner's office will fall on the judges and magistrates. The plan is similar to that which has been in successful operation for several years in Massachusetts.

Buffalo.

Inspection of Immigrants.—Dr. E. D. Bingham has been appointed medical inspector of the port of Niagara. The United States is evidently determined that no diseased immigrants shall enter the country. Eight immigrants were sent back yesterday. Trachoma is the principal disease brought into the United States by the immigrants, most of the sufferers being Italians.

Recommendations Anent County Hospital.—Eben P. Dorr, inspector for the State Board of Charities, has made the following recommendations concerning the Erie County Hospital of Buffalo: Exclusive and modern ambulance service; new nurses' home and conversion of the present house into a venereal ward; cottage for nursery purposes (children should be removed from the main hospital); elevator for hospital; sterilizing equipment for hospital; large ventilating shafts into hospital water closets; shower baths for women; better equipped hospital operating room; watchman's time detector; wall racks or reels for firehose; more oms for inmates of hospital, and more for medical superintendent and family.

PENNSYLVANIA.

Typhoid Fever in Reading.—There are several hundred cases of typhoid fever in Reading. Supplying pure water by the gallon to householders is said to be quite an industry. The hospitals report a scarcity of nurses.

Cornerstone Laid.—The cornerstone of the new Lancaster General Hospital was laid on November 23, with masonic ceremonies. The new building is to cost \$60,000. The institution is nine years old, and treated 403 patients last year. An annual appropriation of \$5000 toward its support is received from the state.

The State Board of Public Charities was recently in session for several days in Philadelphia considering the requests from the hospitals of the eastern section of the state for state aid. At a meeting soon to be held in Harrisburg, requests from hospitals of the western section of the state will be heard. The board makes its recommendations to the legislature next January.

The State Board of Health met in Harrisburg, November 20. The annual report of Dr. Benjamin Lee, secretary, showed that smallpox exists in 87 cities, towns and villages of the state, and that the increase in the number of cases since August 1 has exceeded 50 per cent. monthly. Most of the cases are in the western and southern sections. Dr. J. H. McClelland of Pittsburg was reappointed chairman of the legislative committee of the board, with instructions to make every effort to secure an appropriation of \$50,000 by the next legislature as an emergency fund, to be used by the board as needed to fight contagious diseases. Such a provision formerly existed, but for the past two years the legislature has failed to make an appropriation. Consequently, the board was almost helpless to respond to the appeals for aid in the smallpox epidemic of last winter. Facing the possibility of an epidemic this winter, the board urges the necessity and economy of such an appropriation. Dr. Samuel T. Davis, Lancaster, president of the board, was elected delegate to the American Public Health Association.

TENNESSEE.

Personal.—Dr. James A. Albright, Nashville, was re-elected secretary and executive officer of the Tennessee State Board of Health, at the meeting of that body, October 7.—Dr. Edgar L. Gleaves, Gallatin, health officer of Sumner County, has resigned, and will locate in Olinda.—Dr. Alfred S. Horsley, Knoxville, has been appointed surgeon-in-chief of the McDonald camp in Guatemala.—Dr. William S. De Golia succeeds Dr. Leopold H. Schwerin as surgeon for the Tennessee Central Railway, with headquarters at Crossville.—Dr. Hampton L. Fancher, Isoline, has moved to Orme.

Hospital Staff Appointed.—The newly-appointed staff of St. Thomas' Hospital, Nashville, is as follows: Drs. Charles Brower, Adam G. Nichol, S. McPheeters Glasgow, Richard A. Barr, Worcester A. Bryan, John R. Buist, Lucius E. Burch, John A. Gaines, Perry Bromberg, W. Frank Glenn, James W. Handly, James Brew, William E. Buist, Lynn B. Graddy, Marvin M. Cullom, George H. Price, Hilliard Wood, Edwin G. Wood, John A. Witherspoon, William Bailey, Robert O. Tucker,

Sidney S. Crockett, John T. Altman, James M. Coyle, Owen H. Wilson, Matthew G. Buckner, Samuel M. Bloomstein, Thomas Weaver, A. B. Cooke, Larkin Smith, Louis Leroy and James M. King.

Medical Schools Open.—The medical department of the University of Nashville opened October 1. Dr. William G. Ewing, dean, delivered the opening address. The freshman class numbered 125.—The medical department of Vanderbilt University, Nashville, opened, October 1, with addresses by Rev. W. M. Anderson, Chancellor Kirkland, and the dean, Dr. William L. Dudley.—The twenty-sixth year of the medical department of the University of Tennessee, Nashville, opened, October 1, with an address by Dr. J. Bunyon Stephens, one of the founders. Dr. Paul F. Eve presided.—Memphis Hospital Medical College began its fall session, November 3, in its new building with an enrolment of more than 700.—Chattanooga Medical College opened, October 7, with an enrolment of about 150 students.

UTAH.

Personal.—Dr. George T. Odell, Salt Lake City, has been appointed assistant physician of Salt Lake County.

Fire in Hospital.—On November 11, fire broke out in the Ogden General Hospital, but the damage to the building was not extensive.

Resolutions Regarding Dr. Verbryck.—The Salt Lake County Medical Association has passed resolutions of condolence regarding the death of Dr. George G. Verbryck.

Hypnotic Doctor Fined.—In the case of C. W. Pearce, Ogden, who claimed to be able to cure cancer and other ailments by hypnotism, the accused pleaded guilty and was fined one dollar and given time to get out of the state.

Smallpox Epidemic Feared.—There have been more than one hundred cases of smallpox in and around American Fork, about 10 per cent. of which were severe. Quarantine has been established, but it is claimed that the authorities have been unable to enforce it strictly. It is feared that the disease will be spread over the state.

VIRGINIA.

Medical College Attendance.—The enrolment at the Medical College of Virginia, Richmond, thus far is 250, and that of the University College of Medicine, in the same city, 274.

Personal.—Dr. Lemuel C. Shepard has succeeded Dr. J. Jett McCormick as city bacteriologist of Norfolk.—Dr. John W. Brown, Hampton, recently underwent an operation for appendicitis.

Richmond Hospital for Colored People.—A new corporation, to be known as the Richmond Hospital Association, has been organized, with the following officers: Dr. Richard F. Tancil, president; Dr. Harrison L. Harris, vice-president; Dr. Oswald B. H. Bowser, secretary, and Dr. John Meriweather, treasurer. It is the purpose of the incorporators to erect a large hospital in the suburbs of Richmond for the use of colored patients.

WASHINGTON.

Personal.—Dr. H. P. Miller, Fremont, was recently crushed between a fence and an electric car, and sustained a fracture of the leg.—Dr. Howard R. Keylor, Walla Walla, has been appointed physician at the state penitentiary, vice Dr. James F. Cropp.

Deaths in Washington.—In October there were recorded 406 deaths in the state, of which 246 were males and 160 females. Kings County had 102 deaths, Pierce County 49, and Spokane County 32. Accident caused 53 deaths, homicide 5, and suicide 11.

Nuisances and Communicable Diseases.—The Spokane County Board of Health has published two excellent pamphlets, one detailing the rules and law governing nuisances and their abatement, and the other, rules governing and means to prevent the spread of communicable diseases.

WISCONSIN.

Leper Dies.—Thomas Nelson, the only leper in Dane County, who had been afflicted with the disease for more than thirty years, died in his cottage at the county poor farm, November 1.

Malpractice Suits.—Frank Koeppl has asked damages of \$10,546 against Dr. Walter J. Kelly, for injuries alleged to have been received through the malpractice of the defendant.—Dr. E. Wells Kellogg, Milwaukee, has been sued for damages to the extent of \$10,000, for injuries claimed to have been received at the hands of the defendant while under treatment for a swollen wrist.

Personal.—Dr. Hoyt E. Dearholt, Milwaukee, has returned from Europe.—Dr. Oscar Chrysler will succeed Dr. Almon Clarke as surgeon at the Soldiers' Home near Milwaukee, December 31.—Dr. Charles M. Gould, West Superior, has moved to Tucson, Ariz.—Dr. William F. Beutler has returned from his trip abroad.—Dr. Alfred L. Kastner has been appointed assistant surgeon at the Soldiers' Home, vice Dr. A. Kreutzer, resigned.—Dr. Otto Braun, Merrill, has gone abroad for six months of study.—Dr. Arthur T. Holbrook, Milwaukee, has returned from a six months' course of study in Vienna.—Dr. W. I. Griffin, Ashland, has been appointed physician to the La Pointe Indian Agency, vice Dr. E. S. Davidson, deceased.—Dr. John F. Brown, Mazomanie, has been appointed physician to the state penitentiary, vice Dr. Eugene A. Smith, Waupun, resigned.

GENERAL.

A Santa Fe hospital for the Pacific Coast will be built in Los Angeles or San Bernardino, to care for the employes of the Santa Fe Railway.

A recrudescence of cholera is embarrassing the Philippine Commission and the War Department. The water supply of Manila is threatened. The outbreak in Mindinao, however, is not so severe as was at first reported.

Army Surgeon-General's Report.—In the report of the Surgeon-General of the Army for the year ending June 30, on page 45, the death rate from all causes for the year 1901 is incorrectly given as 19.94 per thousand. It should read 13.94 per thousand. The figures are correctly given in Table 1, page 148. The Surgeon-General requests that we make this announcement, as many copies of the report have been issued.

States Want California Plague Conference.—Five state boards of health have adopted a resolution calling on Surgeon-General Wyman of the United States Marine-Hospital and Public Health Service, to assemble a conference of all state health officers to take action toward the prevention of the spread of bubonic plague, known to be in San Francisco. They base their request on the dangerous policy of the California authorities.

Invalids Must Have Certificates.—The passenger agents of the Terminal Lines Association voted unanimously at the meeting at Denver, November 11, for a law requiring every invalid passenger to have a certificate from his physician stating what disease he has before boarding trains. The secretary of the association was instructed to confer with the city, county and state health officials in regard to the form of certificate best adapted for the purpose, and as soon as this is done plans will be laid for putting the new agreement into effect.

Increase in Suicide.—U. S. census reports show, according to an article in the *Spectator*, an insurance publication, an increase in the number of suicides throughout the Union. In fifty of the largest cities the average number of suicides in 1890 was 12 per 100,000 of population; in 1901 it was 16. In the intervening period at no time did the rate fall below 12, and in 1897 and 1898 it rose to 17.73. There is a wide difference in the suicide rates of some of the fifty cities. In San Francisco it was over 49 last year. Taking the average for the entire decade, the rate in St. Louis was 25.7; in Chicago, 23.3; in Hoboken, N. J., 23, and in that part of New York City included in the boroughs of Manhattan and the Bronx, 20.9; while in Trenton the rate was only 5.1, and in Fall River, Mass., 2.9.

Health of Miners Investigated.—The Strike Commission in session at Scranton summoned several physicians to testify as to the health of the miners. Testimony was to the effect that 99 per cent. of mine workers are anemic, and their general condition below par. The ills suffered especially by miners were said to be catarrh, stomach affection, pleurisy, gout, neuralgia, sciatica, lumbago, rheumatism, pneumonia and asthma. Affections of the respiratory tract were believed to result from the inhalation of coal dust, powder smoke and otherwise vitiated air. It was stated that 90 per cent. of those who reach 50 years of age are afflicted with some form of rheumatism; that few live beyond 50 years of age, the average life of a miner being 25 or 30 years. A member of the Central Poor Board of Luzerne County testified that 70 per cent. in one of the almshouses are miners, and that 40 per cent. of these are crippled by accidents at the mines.

CANADA.

Vancouver Hospital Fund.—A gift of \$1000, among other contributions, raises the Vancouver General Hospital fund to \$14,000.

Appointment.—Dr. Fiset of Quebec has been appointed staff adjutant of the Army Medical Corps of Canada. His office will be at Ottawa.

Smallpox Outbreak.—Fifty cases of smallpox are reported in Kent County, New Brunswick. For some time the affected ones concealed the fact of the outbreak, which allowed its extended spread.

The Academic Palms for Brochu of Quebec.—The French government has decorated Dr. D. Brochu, professor of internal medicine at Laval University and editor-in-chief of the *Bulletin Méd. de Québec*.

Montréal General Hospital Report.—The quarterly meeting of the Board of Governors of the Montréal General Hospital was held last week. A very interesting report was presented. The hospital seems to be in great financial stress. An anonymous subscription has recently been given to the endowment fund of \$3,000, which brings that fund up to \$43,500. The report of the medical superintendent showed 743 patients admitted to the wards in the quarter and 3,301 outdoor patients, against 720 inmates and 7,638 outdoor patients for the same quarter in 1901.

Scarlet Fever in Montréal.—The question of the erection of a new contagious diseases hospital for Montréal is again agitating the minds of the people of that city, and the urgent need has been brought forcibly home to them during the past week when the medical health officer reported that the little shack now used as a hospital for infectious diseases contained eighteen patients suffering from scarlet fever. During the past few days the disease seems to be spreading rapidly and new cases are being reported daily. The disease is said to be of a very violent type. There are only 26 beds in the temporary hospital for scarlet fever patients, and the question is what is to be done when the other beds are occupied.

Ontario Asylums.—The Hon. J. R. Stratton, the provincial secretary in the Ontario government under whose department are the asylums of the province, is quoted as alleging that within the past few months five persons were committed to the asylum as insane, the usual certificates being signed by two medical men in each case, and that all these have been returned to their homes, having been declared perfectly sane by the asylum physicians. This casts a reflection on at least ten physicians of the province, and their cases have been taken in hand by Dr. McKinnon of Guelph, a past president of the Ontario Medical Association, whose presidential address before that body two years ago entered largely into the discussion of asylum affairs in this province. It is charged by the provincial secretary that certain parties have been imposing on the province, and that there is good reason to believe that these five persons were sent to the asylum only to relieve their friends or the House of Refuge. Dr. McKinnon points out, if this be true, it is clearly the duty of the provincial secretary to lay information before the discipline committee of the Ontario Medical Council, so that an immediate investigation can be made. Dr. McKinnon then enquires what tribunal decided that these five persons were not insane, how long they were under observation, further stating that it will be interesting to follow up their future lives. Appointments in the Ontario asylum service are said to be almost wholly on political lines, a doctor-politician very often proceeding directly from the hustings or from the party caucus to the responsible position of medical superintendent of an asylum, the claims of the men who have spent their lives as asylum internes being altogether disregarded. The incident may be the means of directing attention to these anomalous appointments.

FOREIGN.

Nobel Prize.—Major Ronald Ross, Liverpool, of mosquito expedition fame, has been suggested as a probable recipient of the Nobel prize of \$15,000 for malaria research.

Greek Neurologic Periodical.—Vlavianos of Athens has founded a periodical to be devoted exclusively to subjects connected with psychiatry and neurology. The young editor has already won a name by his previous contributions to the literature of these branches.

The Italian Congress of Internal Medicine was held at Rome, October 28, with Dr. Bacelli, the president, in the chair. The main addresses were on "Intravenous Medication," by Patella and Mariani; "Hysterical Fever," by Ughetti, and the "Pathology of Nephritis," by Ascoli.

Institute for Public Hygiene.—Moscow is planning an institute to train physicians for the official sanitary service. The course will include lectures and practical demonstrations. The idea owes its origin to Professor Kapustin of Kasan, and a committee is now at work on the project.

Cholera Spreads in Holy Land.—The source of the widespread epidemic of cholera throughout Palestine, which we have mentioned, was the exodus of panic-stricken fugitives from Egypt endeavoring to escape from the visitation of cholera, which recently swept the valley of the Nile down to Cairo. The crowds escaped through the desert practically by the same route taken by the children of Israel in the exodus under Moses. They reached the Holy Land about October 10, and have spread the disease throughout the country. The lethargic government has been wholly unable to cope with the situation or to restrain the people. The ancient city of Gaza, memorable from the exploits of Samson, suffered severely, 984 deaths being recorded. The epidemic is now decreasing in all the localities first attacked, but fresh cases appear daily in new places. The total number of deaths is stated as 1864. The government is endeavoring to confine the epidemic to Palestine.

Book Notices.

LEDGER OF MONTHLY BALANCES AND INDEX OF ACCOUNTS, to Be Used in Connection with the Physicians' Protective Visiting List Constituting the Physicians' Protective Accountant. In Two Books. Leather. Price, \$2.00. Chicago: The Clinic Publishing Co. 1901.

This is a very compact, simple and economic system of keeping accounts. At first examination the general arrangement seems complicated, but this is more apparent than real, and its practical utility is soon evident when closely studied or when put into use. The system consists of two books, a ledger and a monthly visiting list. While the former is intended for the pocket it really takes the place of the ordinary ledger, and is not necessarily to be carried on one's person. The visiting list consists of a durable cover, for the monthly lists the latter being changed each month. This arrangement makes the book to be carried in the pocket, compact, light and flexible.

A TEXT-BOOK OF PATHOLOGY AND PATHOLOGIC ANATOMY. By Dr. Hans Schmar. . . . and First Assistant in the . . . ated from the Sixth German . . . ructor in Pathology in the . . . v York. Edited, with Addi- . . . of Pathology in the Cornell . . . Illustrated with 351 En- . . . Plates. Cloth. Pp. 602. . . . gravings, Inc . . . Price, \$4.00. Philadelphia and New York: Lea Brothers & Co. 1902.

This book contains a condensed statement of the principal facts of pathology, more particularly general pathological histology and pathological anatomy. That its scope and the character of its subject-matter merit the extravagant praise of the editor, we are much inclined to question. In spite of the fact that it has passed through several editions in Germany within a few years, we doubt the desirability, from a pedagogic point of view, of putting into the hands of American medical students so dogmatic and "condensed" a statement of the present knowledge as to create the impression that pathology is a dead and not a living and daily growing science. Unless supplemented by stimulating explanations and references to other works and articles by an enthusiastic teacher and by a first-rate course in laboratory work, we are inclined to fear that the ordinary student after having committed the principal parts of this book so well to memory that he could answer readily the questions of the recitation room, would think that he "knew it all." At the most this book can serve only as an introduction to the study of pathology. It is well gotten up and the illustrations are good; many of the colored ones, however, lack necessary explanation as to the staining methods used. We have not been able to find in this book a satisfactory statement of the theory of cytotoxin formation and action presented by Ehrlich, and so fruitful of valuable investigation in hemolysis, bacteriolysis and allied fields of the greatest importance to pathology.

A SYSTEM OF PHYSIOLOGICAL THERAPEUTICS. A Practical Exposition of the Methods, Other Than Drug-Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis Cohen, A.M. M.D., Professor of . . . peutics in the Philadelphia Polyclinic. Volume . . . Thermotherapy, Heliotherapy, and Phototherapy. Winternitz, Professor of Clinical Medicine in the University of . . . : Strasser and Dr. B. Buxbaum; and by Dr. E. Heinrich Kisch. Eighty- . . . Philadelphia: P. Blakiston's Son & Co. 1902.

This volume is devoted to hydrotherapy, thermotherapy, heliotherapy and phototherapy. It also contains notes on American springs by Guy Hinsdale and chapters on the classi-

fication of mineral waters and their distribution in the United States by A. C. Peale. The chapter on the "Practice of Phototherapy and Thermotherapy" is written by J. H. Kellogg. This volume also contains a very interesting article by Harvey Cushing on "Saline Irrigation and Infusions." A chapter on "The Methods for Therapeutic Use of Water, Heat, Cold, Light and Mineral Baths" is appended by the editor. This volume is the most useful to the general practitioner of any of the series with the possible exception of Volume VI. Part one treats of the physiologic basis of hydrotherapy, its mechanical and chemical effects on the different organs. Part two considers the technic and methods of application, describing, with splendid illustrations, the method of giving a general bath, partial baths, wet packs, the application of coils, bags, etc. Part three treats of the hydrotherapeutic measures to be applied in disease of the different organs and in the infectious diseases. The supplemental chapters take up heliotherapy, electrotherapy and the application of dry and moist heat. One chapter is devoted to the use of saline irrigations and infusions and their methods of administration. This chapter is of special practical importance to the general practitioner. While the volume contains, in order to be thorough, chapters on unimportant subjects, such as gas baths, peat baths, medicated baths, etc., it contains a sufficient amount of practical matter to render it a book of great value.

GENERAL PARESIS: Practical and Clinical. By Robert Howland Chase, A.M., M.D., Physician-in-Chief, Friends Asylum for the Insane. Illustrated. Cloth. Pp. 291. Price, \$1.75. Philadelphia: P. Blakiston's Son & Co. 1902.

Chase has taken the most modern name for the subject which he here treats and for a convenient little monograph which covers quite completely, though in rather a general way, the whole range of symptoms, pathology, treatment, etc. He has gone over the authorities and literature of the subject very thoroughly and has given in a condensed form the general facts. The book is full of illustrative cases taken from all sources. As regards the question of etiology, the author does not follow those who consider it exclusively of syphilitic antecedents, but recognizes a syphilitic insanity as closely resembling this condition. The illustrations are excellent and give one a very fair idea of the general appearance of paresis in its different stages. We notice an omission as regards the differential diagnosis. There is nothing specially said in regard to one of the most important points, namely, distinguishing the early symptoms of this disease from neurasthenia. There have been so many that have tried to point out the differences in recent literature that it would have been well had the author given some general remarks at least on this point. The fact is that it is impossible to distinguish the early stages of paresis from many cases of neurasthenia, the distinction made as regards the loss of memory, etc., is not reliable. Another criticism which we might make is that some of the abstracts or illustrations from the literature are rather too brief to be of special value or particularly to the point. This, however, is a minor matter, and as a whole the book is one that will be of service and a convenient one for consultation by those who have to do with this, unfortunately, too prevalent disease.

Marriages.

EDGAR S. HOOPER, M.D., to Miss Emma Vickers, both of Darlington, Wis., November 12.

JOHN THOMAS MOORE, M.D., to Miss Dorcas Pennock, both of Algood, Tenn., November 12.

JOHN J. HORTON, M.D., New Market, Ala., to Miss Broughton of Elora, Tenn., November 11.

HIRAM A. FULTON, M.D., to Miss Jeanette Putnam, both of Eau Claire, Wis., November 5.

ALBERT E. SELLENINGS, M.D., New York, to Miss Florence Corner of Columbus, Ohio, November 25.

JUNIUS H. WATTLES, JR., M.D., Kenosha, Wis., to Miss Amy A. Bamber of Kansas City, Mo., November 14.

SAMUEL M. D. CLARK, M.D., New Orleans, to Miss Elise Cockerham of Natchitoches, La., November 15.

CLARENCE S. MAXWELL, M.D., Mount Olive, N. C., to Miss Addie Thomas of Beaufort, N. C., November 12.

EDWARD AUGUSTUS CORCORAN, M.D., and Katherine Winifred McCarthy, M.D., both of Chicago, August 28.

GEORGE W. BREWSTER, M.D., Boston, Mass., to Miss Ellen Mackenzie Hodge of Washington, D. C., November 11.

SAMUEL K. FROST, M.D., New York City, to Mrs. Josephine Mayo Stillman of Pittsfield, Mass, in Brooklyn, November 15.

JACOB HINDEN, M.D., Strong City, Kan., to Miss Myra E. Lomas of Topeka, Kan., at Williamsburg, Kan., November 12.

ROWELL C. FAUNTLEROY, captain and assistant surgeon, U. S. Army, Madison Barracks, New York, to Miss Blanche McGonigle, at Leavenworth, Kan., November 19.

Deaths.

Walter Reed, M.D.—In the death of Dr. Walter Reed of the Army, which occurred November 23, scientific medicine has suffered a severe loss, and the profession has been bereft of a constant and enthusiastic student. Walter Reed was born in Virginia in 1857, was graduated from the Medical Department of the University of Virginia, Charlottesville, and from Bellevue Hospital Medical College, New York. He was appointed from Virginia to the Medical Department of the Army and was commissioned first-lieutenant and assistant surgeon, June 26, 1875; five years later he was made captain and assistant surgeon, and on Dec. 4, 1893, was promoted to the position of major and surgeon. At the time of his death he was at the head of the list of majors of the Medical Department of the Army. He made special studies in bacteriology at the Johns Hopkins Hospital, Baltimore, then was assigned to duty as attending surgeon at St. Paul, and from there was selected by the Surgeon General as bacteriologist in his office, and was on duty there from 1893 until the outbreak of the Spanish-American War. During that time he was a member of the board of medical officers to investigate and report on the prevalence of typhoid fever in home camps and the commission recommended the plan of collecting excreta in galvanized iron tanks, which was afterwards successfully carried out at the U. S. General Hospital, Presidio, Cal., and was followed by cessation of the disease. His especial work was in the line of preventive medicine and military hygiene. His most notable services to the science of medicine were those connected with yellow fever. He was appointed president of the board of the other members of which were Drs. Carroll and Agramonte of the Army, which met in Cuba for the study of yellow fever, and their discoveries in connection with the cause and prevention of this disease mark an epoch in medicine. Their reports have already been published in *THE JOURNAL* and show the highest degree of scientific accuracy combined with excellent discrimination. Dr. Reed was operated on for appendicitis on November 17, but did not rally from the operation, and died November 23.

Harrison Steele, M.D. Rush Medical College, Chicago, 1868, chief surgeon of the Toledo, Peoria and Western Railroad, a member of the Illinois State Medical Society, and once president of the Peoria City Medical Society, died at his home in Peoria, November 14, after a lingering illness, aged 66. The Peoria City Medical Society, at a special meeting held November 15, passed resolutions of eulogy and sorrow.

William Henry Haynes, M.D. New York University, 1878, a specialist in nervous and mental diseases and president of the Brooklyn Society for Neurology, died at his home in Brooklyn, November 15, from Bright's disease, after an illness of one year, aged 46.

William H. Crim, M.D. University of Maryland, 1870, died suddenly at his home in Baltimore, from heart disease, November 15, aged 57. He was assistant surgeon of the Fifth Regiment, Maryland National Guard, in 1872, and surgeon in 1881.

John H. Currey, M.D. Shelby Medical College, Nashville, Tenn., a surgeon in the Confederate service, in the Civil War, and postmaster of Nashville, Tenn., for several years, died at his home near Nashville, November 11, from apoplexy, aged 71.

Roger Trowbridge Atkinson, M.D. *cum laude*, Harvard University Medical School, 1898, assistant surgeon, U. S. Navy, attached to the U. S. S. *Prairie*, died at the Naval Hospital, Norfolk, Va., November 10, from malarial fever, aged 30.

Thomas E. Powell, M.D. University of Louisville, Ky., 1874, some-time president of the Vanderburg Medical Society, died at his home in Evansville, Ind., November 17, from rheumatism of the heart, aged 55.

Frederick W. Vandersloot, M.D. University of Maryland, Baltimore, 1855, for many years a practitioner of Lock Haven, Pa., died at his home in Wilmington, Del., from heart disease, November 14, aged 72.

Leroy J. Wisman, M.D. University of Michigan, Ann Arbor, 1898, a member of the Livingston County (Ill.) Medical Society, died at his home in Huntington, Ind., November 9, after a short illness.

Charles Brewster Spratt, M.D. Jefferson Medical College, Philadelphia, 1897, of Jacksonville, Fla., died, November 13, from typhoid fever, aged 32. At a special meeting of the Duval County Medical Society, November 13, resolutions were adopted.

Lundern M. Phillips, M.D. University of Vermont, 1882, a member of the Yates County (N. Y.) Medical Society, died at his home in Penn Yan, from stomach trouble, November 10, aged 44.

Ira B. Geer, M.D. formerly of Evanston, Ill., but for several years a resident of Florida, died at his home in Winter Park, November 8, from debility, following a fracture of the hip, aged 84.

James William McQuitty, M.D. Missouri Medical College, St. Louis, 1894, died at his home in Midway, Mo., from an overdose of opium accidentally administered, November 5, aged 30.

George F. Melifant, M.D. Dartmouth Medical College, Hanover, N. H., 1888, died at his home in Millville, Mass., November 4, from biliary colic, after a short illness, aged 38.

Durham M. Creel, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1878, died at his home in Industry, November 12, from exhaustion following a carbuncle on the neck, aged 83.

Gregory J. Phelan, M.D. New York University, 1847, a member of the American Medical Association, died at his home in San Francisco, November 5, from paralysis, aged 80.

A. DeV. Boggs, M.D. Texas Medical College and Hospital, Galveston, 1868, died at his residence in Marquez, Texas, November 7, from pneumonia, after a short illness, aged 58.

James Allen Meek, M.D. Jefferson Medical College, Philadelphia, 1881, died from pneumonia at his home in Bunker Hill, Ind., October 30, after an illness of two weeks, aged 74.

Charles M. Hollingsworth, M.D. University of Maryland, Baltimore, 1882, died suddenly at his home in Harrisonburg, Va., from heart disease, November 9, aged 45.

Duncan McLarty, M.D. Toronto (Ont.) University, 1867, twice mayor of St. Thomas, Ont., died at Buffalo General Hospital, a week after an operation, aged 63.

Francis T. R. Wagner, M.D. University of Gottingen, Germany, 1857, died suddenly from apoplexy, at his home in Wilkesbarre, Pa., November 1, aged 68.

Alex. H. Davidson, M.D. Tulane University, New Orleans, 1895, of Boerne, Texas, died at San Antonio, November 2, from peritonitis, after a long illness, aged 39.

William H. Kimberlin, M.D. Hospital Medical College, Kansas City, 1884, an eye specialist of Kansas City, was shot and killed by a patient, November 11.

James B. Clifton, M.D. New York University, 1857, died at his home in Lonsburg, N. C., November 2, from paralysis, after an illness of one week, aged 67.

Charles B. Riebsam, M.D. University of Pennsylvania, Philadelphia, died at his home in Madison, Wis., November 12, after an illness of one day, aged 76.

Willis Sperry, M.D. Western Reserve University, Cleveland, Ohio, 1851, died at his home in Tallmadge, Ohio, November 7, from heart disease, aged 79.

Alfred Booth, M.D. Harvard University Medical School, Boston, died at his home in Springfield, Mass., November 16, from senile debility, aged 78.

Newell G. Tullis, M.D. Medical College of Georgia, Augusta, 1872, died at his home in Thomasville, Ga., November 11, after a long illness, aged 50.

David Lyle, M.D. Medical College of the State of South Carolina, Charleston, 1868, died at his home in the Edgemoor Section, S. C., November 10.

J. Moore Hart, M.D. Trinity Medical College, Toronto, 1871, of Toronto, while hunting in Muskoka, died suddenly, November 10, from apoplexy, aged 52.

J. S. Spangler, M.D. College of Physicians and Surgeons, Keokuk, Iowa, died at his home in Ute, Iowa, November 5, from pneumonia, aged 43.

H. M. Craton, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1867, of Jesup, Iowa, died at Downing, Wis., November 18, aged 76.

William Henry Hosmer, M.D. Dartmouth Medical College, Hanover, N. H., 1838, died at his home in Penacook, N. H., November 15, aged 88.

George S. Dodge, M.D. Harvard University Medical School, Boston, 1881, died at his home in West Acton, Mass., November 2, after a long illness.

Ransom R. Crothers, M.D. University of Maryland, 1873, at Colora, Md., November 8, from heart disease, after an illness of two weeks, aged 57.

John C. Hardy, M.D. Columbus (Ohio) Medical College, 1881, died at his home in Marietta, Ohio, from hemorrhage of the stomach, aged 47.

Adelbert E. Burdick, M.D. New York University, 1873, died at his home in Manistique, Mich., November 12, from tuberculosis, aged 56.

Junius H. Wattles, M.D. University Medical College, Kansas City, Mo., 1897, died at his home in that city, November 9, aged about 50.

Arthur Britnall, M.D. Western Reserve University, Cleveland, Ohio, 1881, of Liverpool, Ohio, died recently at Lakeside Hospital, Cleveland.

Samuel C. Fechtig, M.D. University of Pennsylvania, Philadelphia, 1846, died at his home in Wellersburg, Pa., November 2, aged 80.

George W. Fringer, M.D. Missouri Medical College, St. Louis, 1869, died at his home in Pana, Ill., November 17, aged 67.

William P. Kennedy, M.D. University of Maryland, Baltimore, 1885, died at his home, in Warsaw, N. C., November 9.

Miscellany.

Clippings from Lay Exchanges.

HOW IS THE PATIENT?

"Last Saturday, Dr. — performed an operation . . . which, from a scientific standpoint, places former recorded operations in the dark. — has been afflicted with plural effusion of the right lung. Dr. — inserted the pump, and after extracting about a pint was inclined to let it rest at that, but the patient was not in the least fatigued so he continued and removed the entire accumulation, 68 ounces or more than half a gallon.

"Dr. — has the bottle and its contents on exhibition. The quantity removed is double what the authorities claimed to be a safe operation."—*Iron (Cal.) Echo*, May 10, 1902.

SEVERAL SPINAL JOINTS REMOVED.

"The physicians at the City Hospital yesterday performed the operation of laminectomy upon —, an Italian, in hopes of relieving him of paralysis caused by a broken back. . . . The physicians removed several joints from the backbone to relieve the pressure against the spinal cord which caused the paralysis."—*Cincinnati (Ohio) Commercial Tribune*, April 25, 1902.

SLIPPED INNOMINATE.

"Mr. B— had been examined and treated by a number of prominent physicians but the cause of his trouble which was usually diagnosed as sciatica had been overlooked. His condition was one that osteopaths term 'slipped innominate,' the ilium on the affected side being slightly dislocated upward and backward."—*Ludington (Mich.) Record-Appeal*, May 16, 1902.

A DARNED RUPTURE.

"Dr. — and his assistants placed about twenty-five feet of silver wire in —'s abdomen in darning a rupture of the anterior abdominal wall."—*Chicago Chronicle*, April 25, 1902.

THE WISCONSIN FOR HAHNEMANN.

"Dr. —, Dean of Hawverawnn Medical college was in town on Thursday. . . ."—*Janesville (Wis.) Gazette*, June 1, 1901.

ERAMIC COMA.

"Dr. J. E. McD— died at the family residence. . . . The immediate cause of death was eramic coma the same being brought on by catarrhal jaundice and kidney and bladder trouble."—*Quincy (Ill.) Journal*, April 22, 1902.

State Boards of Registration.

Prosecution in Kansas.—Dr. H. W. Roby, Topeka, secretary of the Kansas board, is to be congratulated on his campaign against unlicensed practitioners in that state. Information against seventeen of these in Kansas City, Kan., has been filed, and thirty more are to be proceeded against in that city.

Osteopathic School Not Reputable.—Some time ago, one M. V. Aldrich was refused license in Goshen, Ind., because he did not have a diploma from a college of the required standing. He sued the Indiana board and was defeated. On appeal the decision against him has just been reaffirmed. The evidence in the case showed that the college which Mr. Aldrich attended, the National School of Osteopathy, Chicago, is not what the board considers "reputable."

Illinois April Examination.—The following is a report of the examination held by the Illinois State Board of Health, at Chicago, April 9-11, 1902, as supplied by Dr. J. A. Egan, secretary, Springfield: Written examination; subjects, 11; questions, 110; percentage required to pass, 75; total number examined, 98; passed 93; failed, 5.

Candl. Sch. of date. Pract.	PASSED.	College.	Year Grad.	Per Cent.
992	R.	College of Phys. and Surgs., Chicago.	1902	85
999	R.	College of Phys. and Surgs., Chicago.	1902	84
1010	R.	College of Phys. and Surgs., Chicago.	1902	84
1025	R.	College of Phys. and Surgs., Chicago.	1902	83
1034	R.	College of Phys. and Surgs., Chicago.	1902	81
1036	R.	College of Phys. and Surgs., Chicago.	1902	82
1039	R.	College of Phys. and Surgs., Chicago.	1902	85
1040	R.	College of Phys. and Surgs., Chicago.	1900	81
1041	R.	College of Phys. and Surgs., Chicago.	1902	82
1061	R.	College of Phys. and Surgs., Chicago.	1902	82
1062	R.	College of Phys. and Surgs., Chicago.	1902	79
1074	R.	College of Phys. and Surgs., Chicago.	1902	81
1086	R.	College of Phys. and Surgs., Chicago.	1902	84
1087	R.	College of Phys. and Surgs., Chicago.	1902	83
993	R.	Rush Medical College.	1901	87
996	R.	Rush Medical College.	1902	86
997	R.	Rush Medical College.	1902	86
998	R.	Rush Medical College.	1902	88
1002	R.	Rush Medical College.	1902	87
1004	R.	Rush Medical College.	1902	87
1007	R.	Rush Medical College.	1900	79
1015	R.	Rush Medical College.	1902	78
1017	R.	Rush Medical College.	1902	89
1021	R.	Rush Medical College.	1902	84
1023	R.	Rush Medical College.	1902	82
1026	R.	Rush Medical College.	1902	86
1028	R.	Rush Medical College.	1902	92
1029	R.	Rush Medical College.	1902	90
1033	R.	Rush Medical College.	1902	85
1035	R.	Rush Medical College.	1902	84
1037	R.	Rush Medical College.	1902	91
1044	R.	Rush Medical College.	1902	83
1045	R.	Rush Medical College.	1902	90
1049	R.	Rush Medical College.	1902	87
1054	R.	Rush Medical College.	1902	80
1056	R.	Rush Medical College.	1902	80
1063	R.	Rush Medical College.	1902	87
1064	R.	Rush Medical College.	1902	90
1065	R.	Rush Medical College.	1902	88
1068	R.	Rush Medical College.	1902	83
1076	R.	Rush Medical College.	1900	90
1085	R.	Rush Medical College.	1901	83
1089	R.	Rush Medical College.	1902	85
994	H.	Chicago Homeo. Medical College.	1902	84
1083	H.	Chicago Homeopathic Medical College	1902	85
995	H.	Dunham Medical College.	1902	86
1060	H.	Dunham Medical College.	1902	90
1069	H.	Dunham Medical College.	1902	80
1000	R.	St. Louis College of Phys. and Surgs.	1902	81
1008	R.	St. Louis College of Phys. and Surgs.	1902	81
1019	R.	St. Louis College of Phys. and Surgs.	1902	80
1047	R.	St. Louis College of Phys. and Surgs.	1902	82
1071	R.	St. Louis College of Phys. and Surgs.	1902	83
1077	R.	St. Louis College of Phys. and Surgs.	1902	76
1079	R.	St. Louis College of Phys. and Surgs.	1902	79
1005	R.	University of Pennsylvania.	1898	90
1073	R.	University of Pennsylvania.	1900	86
1051	R.	University of Naples, Italy.	1898	84
1052	R.	University of Geneva, Switzerland.	1899	86
1084	R.	University of Michigan.	1899	88
1006	E.	Bennett Medical College.	1902	87
1009	E.	Bennett Medical College.	1902	86
1011	E.	Bennett Medical College.	1902	84
1012	E.	Bennett Medical College.	1902	80
1013	E.	Bennett Medical College.	1902	80
1022	E.	Bennett Medical College.	1902	85
1024	E.	Bennett Medical College.	1902	75
1027	E.	Bennett Medical College.	1902	88
1030	E.	Bennett Medical College.	1902	87
1046	E.	Bennett Medical College.	1902	87

Candl. Sch. of date. Pract.	PASSED.	College.	Year Grad.	Per Cent.
1053	E.	Bennett Medical College.	1902	87
1058	E.	Bennett Medical College.	1902	80
1072	E.	Bennett Medical College.	1902	81
1078	E.	Bennett Medical College.	1902	80
1081	E.	Bennett Medical College.	1902	80
1082	E.	Bennett Medical College.	1902	81
1014	R.	Northwestern Univ. Medical School.	1902	81
1016	R.	Illinois Medical College.	1902	92
1048	R.	Illinois Medical College.	1902	82
1075	R.	Illinois Medical College.	1902	77
1080	R.	Illinois Medical College.	1902	84
1018	R.	Laval University, Quebec.	1901	80
1032	R.	National Medical University.	1902	87
1050	R.	National Medical University.	1901	87
1038	E.	American Medical College, St. Louis.	1902	84
1088	E.	American Medical College, St. Louis.	1902	79
1042	R.	Harvey Medical College.	1902	82
1043	R.	Marion Sims Med. College, St. Louis	1899	92
1055	R.	Michigan Coll. of M. and S., Detroit.	1901	77
1057	R.	Jefferson Medical College.	1875	81
1066	R.	Louisville Medical College.	1902	77
1067	P.M.	College of Med. and Surg., Chicago.	1902	86
1070	H.	Hahnemann Medical College, Chicago	1902	86
FAILED.				
1001	P.M.	National Medical University, Chicago	1902	70
1003	H.	Hahnemann Medical College, Chicago	1901	73
1020	H.	Hahnemann Medical College, Chicago	1884	69
1031	R.	Jenner Medical College.	1901	64
1059	R.	College of Phys. and Surgs., Chicago.	1902	73

Association News.

Report on the Pathologic Exhibit.

Dr. F. M. Jeffries, New York, Chairman of the Committee on Pathologic Exhibit at the Saratoga meeting of the American Medical Association, held June 10 to 13, 1902, makes the following report:

From a standpoint of attendance as well as the extent of the materials brought to Saratoga the exhibit was an undoubted success this year, even exceeding the expectations of those interested in its achievement.

The Committee wishes to express its sincerest gratitude to those by whose efforts this success was attained. Those not familiar with museum and laboratory work can form no appreciation of the amount of labor involved in the selection, preparation and shipment of an exhibit. It means labor, too, for which not even an indirect monetary remuneration can be expected and accordingly are the thanks of the American Medical Association as a whole all the more necessary.

Those who have felt that such an exhibit was not only impractical but unnecessary have now had three successful exhibits to point out their errors. The Scientific Exhibit is not intended to be of interest alone to laboratory men—this is indeed a small part of its scope. It is true the laboratory man finds here a mint of information in his line, especially in the art of mounting and preserving museum specimens. He comes in contact with workers in the same line from all parts of the continent and leaves the exhibit with a host of new ideas which he could never have attained by a perusal of all current literature.

But what of the greater number of visitors—the practitioners, be they general practitioners, surgeons or specialists? No matter what his specialty the medical man could find here unlimited material, all grist for his mill. No one museum or laboratory could afford him the practical information that awaited him here. And notwithstanding the statement made in the opening paragraph concerning the attendance, the writer feels that the members did not take advantage of the exhibit as they should. There were scores present in Saratoga who did not visit the exhibit. Many of those who called did so because friends discovered (?) the exhibit and went out and brought them in.

The location this year was ideal in every respect and should be remembered by future committees on arrangements. If the attendance is not all that could be wished in such quarters much less must be expected in rooms that are inaccessible or otherwise undesirable.

The exhibit was housed in the ball-room of Congress Hall, one flight up and fronting on the main street. We had a sign up across the sidewalk beneath which every visitor had to pass in order to get to the bureau of registration, Association post-office, etc.

The scope of the exhibit was even greater than that of 1900, though numerically it was not so great, comprising as it did 1,528 specimens as opposed to 2,130 at St. Paul. It will be observed that the number of exhibitors is surprisingly small when the number of exhibits is considered.

It was the effort of the committee this year to avoid the necessity of classification at the exhibit by having each exhibitor confine his selections as far as possible to materials illustrative of one theme, as it were. By this means each exhibit was left intact, which was not only a source of satisfaction to the exhibitors, but was a means of saving much labor when time was a consideration.

In the opinion of the committee future exhibits should not be larger than the one at present under consideration. In the first place a larger exhibit might be uninviting to the visitor because of its extensiveness and the labor involved in its inspection. Secondly, a larger exhibit could hardly be accommodated with satisfactory housing and thus cause the exhibits to be cramped and crowded. And finally, future exhibits must be considered and we must not put all our eggs in one basket, as it were.

Though the exhibit is under the auspices of the Section on Pathology and Physiology, the physiologic exhibit was woefully meager and yet the physiologic laboratories and classrooms could furnish valuable materials in almost unlimited quantities. The attention of future committees is called to this feature that they may put forth extra efforts to secure such exhibits and thus greatly enhance the usefulness of the department.

The attention of future committees is finally called to the necessity of having an attendant at the door of the hall to keep out those having nothing but morbid curiosity to satisfy. At Saratoga it was found that the local population became greatly interested, and boys, girls, men and women began to fill the hall until it became necessary to station a man at the door, and if this man's experience counts for anything, future attendants should be of the strenuous sort.

Our thanks are due to the Albany Medical College and Ernst Leitz for the loan of fifty microscopes during the session.

LIST OF EXHIBITS.

COLLEGE OF PHYSICIANS, MILWAUKEE: THOMAS FITZGIBBONS.
Photographic illustrations of tumors removed..... 35

Such a collection taken in conjunction with the microscopic sections and histories would comprise a most valuable source of information.

DR. BYRON ROBINSON, CHICAGO.
Skiagraphs of injected subjects demonstrating vascular systems 15

CORNELL MEDICAL COLLEGE, DR. B. H. BUXTON.
Microphotographs and enlargements, tissues and bacteria..... 50

This collection was admirable in every respect and represents the highest type of skill and perfection in laboratory photography.

CORNELL MEDICAL COLLEGE, DR. J. EWING.
Confluent hemorrhagic variola, diphtheritic bronchitis and lobular pneumonia: 1
Conglomerate eruption (full pustular stage)..... 1
Confluent variola, diffuse and hemorrhagic..... 1
Confluent scabbing (forearm)..... 1
Bullous: 1
Secondary hemorrhagic variola, diphtheritic tracheitis..... 1
Acute ulcerative endocarditis (variola)..... 1
Late discrete variola (trachea)..... 1
Conglomerate hemorrhagic 1
Punctate hemorrhagic in a bleeder..... 1
Various hemorrhagic in a bleeder..... 1
Conglomerate eruption—diffuse, hemorrhagic..... 1
Scanty discrete variola—late scarlatina—form eruption..... 1
Various stages of eruption—hemorrhagic, petechiae..... 1
Early confluent (trachea)..... 1
Primary hemorrhagic (kidney, 2 cases)..... 2
Primary hemorrhagic (trachea, 2 cases)..... 2
Early secondary hemorrhagic (trachea)..... 1
Full pustular eruption (infant)..... 1
Confluent secondary hemorrhagic..... 1
Confluent secondary hemorrhagic (black smallpox)..... 1
Primary hemorrhagic (negro)..... 1
Human glands (pustular lesions of the skin)..... 1
Variola (rib)..... 1
Primary hemorrhagic (death on third day of disease)..... 1
Confluent secondary hemorrhagic (trachea)..... 1
Diphtheritic lesions of the trachea. Peritracheal edema and death after tracheotomy: 1
Primary hemorrhagic (trachea)..... 1
Primary hemorrhagic (colon)..... 1
Discrete lesion of trachea..... 1
Acute ulcerative endocarditis (variola)..... 1

Confluent pustular..... 1
Flat bullous and sero-pustular eruption (child)..... 1
Hemorrhagic and necrotic orchitis (variola)..... 1
Mesenteric lymph nodes (child) (variola)..... 1
Total 34

CORNELL MEDICAL COLLEGE, DR. JOHNSTON.
Melanoma: Tumor and metastases in skin, liver, lungs and heart..... 6
Spindle-celled Sarcoma: Pedunculated growth from skin of thigh, 20 years' standing..... 1
Endothelioma from below inferior maxilla..... 1
Total 8

BOSTON UNIVERSITY SCHOOL OF MEDICINE, O. R. CHADWELL AND W. H. WATERS.
Gross pathologic specimens preserved in Kaiserling's fluid and mounted in gelatin in Petri dishes..... 88
Too much can not be said in praise of this collection or of this method for mounting tissues for teaching purposes. The natural colors and markings are retained, close inspection is admitted.

DARTMOUTH MEDICAL SCHOOL.
Fibroma of uterus, weight 42 pounds..... 1
Malignant adenoma of fundus uteri..... 1
Congenital cystic kidney..... 1
Spindle-celled sarcoma, lower jaw..... 2
Carcinoma of omentum..... 1
Epithelioma of cervix uteri..... 3
Carcinoma of colon..... 1
Total 10

DR. D. A. KUYE, RICHMOND, VA.
Gross and microscopic specimens of tubercular iritis in girl 11 years of age..... 6
EDWARD GIBBS, X-RAY LABORATORY, N. Y. UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE.
X-ray illustrations of bronchial tree in situ injected with fine bird shot 7

DR. H. G. GRAHAM, CHICAGO.
Microscopic demonstrations of diatomace and bacteria..... 14
DR. WINFIELD S. HALL, CHICAGO.
Chest pantograph for measuring contours of chests..... 1

DR. LEO LOER.
Sarcoma of rat with drawings from microscopic specimens... 3

N. Y. HOSPITAL FOR RUPTURED AND CRIPPLED—F. M. JEFFRIES.
Ostitis of vertebrae..... 5
Multiple ostitis 1
Muscular cavanoma 1
Hip-joint disease 2
Osteo-myelitis, femur and tibia..... 1
Ankylosis of knee-joint..... 1
Tubercular ostitis, lower end of femur..... 2
Tubercular ostitis os calcis..... 1
Double hip-joint disease, bony ankylosis..... 1
Total..... 15

DR. A. D. MEWBORN, NEW YORK CITY.
Cultures of fungi of skin diseases grown on media in Erlenmeyer flasks 77
Photographs of same..... 16
Lantern slides of same..... 13
Colored charts illustrating skin lesions..... 9
Slides of drop cultures of trichophytos, microsporium, achorion oospora, etc. 25
Bodin's method of making drop cultures of trichophytos..... 1
New method of making drop cultures of the hyphomycetæ..... 1
Total..... 142

This collection gave evidence of a great amount of labor requiring skill and patience and embracing a department of biology greatly neglected in this country. Dr. Mewborn is to be congratulated on the results he has attained.

MUSEUM MOSES TAYLOR HOSPITAL, DR. J. M. WAINWRIGHT, SCRANTON, PA.
Joint-mice 2

HARVARD MEDICAL SCHOOL, DR. W. T. PORTER.
Exhibit of some new physiologic apparatus..... 12

HYGIENIC LABORATORY, U. S. MARINE-HOSPITAL SERVICE.
Cultures of tubercle bacilli on various fruits and vegetables as nutrient media 72
Cultures of acid-proof bacilli resembling tubercle bacilli grown on various fruits and vegetables as nutrient media..... 72
Total..... 144

MEDICAL CLINIC OF RUSH MEDICAL COLLEGE, DR. FRANK BILLINGS.
Series of microphotographs of spinal cord lesions..... 20
THE UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE, LEON T. LE WARD.

Larynx, edema of..... 2
Larynx, syphilitic ulceration of..... 1
Larynx, asphyxia due to lodgment of collar button..... 1
Lung, from 2-year-old child, showing acute lobar pneumonia and fibro-purulent pleurisy..... 1
Lung, tuberculosis, acute or chronic..... 1

Lung, acute phthisis	1
Lung, chronic tuberculosis, showing large hemorrhage.....	1
Liver, echinococcus multilocularis, fourth in the U. S.....	1
Liver, solitary abscess (amebic colitis).....	1
Kidney, hypernephroma.....	1
Kidney, chronic tuberculosis	1
Kidney, embolic abscesses	1
Kidney, renal calculi	1
Kidney, cystic (congenital)	1
Kidney (pair), post-scarlatinal nephritis.....	1
Kidney (pair), fatty and parenchymatous degeneration.....	1
Bladder, papilloma	1
Brain, sarcoma of right optic thalamus.....	1
Brain, endothelioma of dura indenting brain.....	1
Brain, atheroma of cerebral vessels.....	1
Brain, hemorrhage into cerebellum.....	1
Brain, glioma of frontal lobe.....	1
Spleen, marked millary tuberculosis.....	1
Fibroid uterus complicating pregnancy.....	2
Carcinoma of cervix uteri complicating pregnancy.....	1
Fetus in utero—seven weeks' gestation.....	1
Fetus with membranes, about five weeks' gestation.....	1
Placenta from case of triplets.....	1
Encephalic monster, two-faced.....	1
Cephalothoracopagus	1
Heart, chronic interstitial myocarditis.....	1
Heart, fatty degeneration.....	1
Melano-sarcoma of humerus.....	1
Sarcoma of small intestine.....	1
Carcinoma of stomach.....	1

H. J. PRENTICE.

Radiographs, showing bronchial tree <i>in situ</i> , injected with fine bird shot	7
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L. B. GOLDHORN.

Photomicrographs and drawings of blood parasites stained by the Goldhorn method.....	23
Total.....	67

This collection from the University and Bellevue Hospital Medical College, comprising as it did such a diversity of material, rich in rare specimens, was worth all the trouble encountered in getting up the exhibit. The laboratory work in its preparation represented the highest type.

COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO, ILL.

Gangrene specimens	7
Liver specimens	6
Heart specimens	10
Pelvic specimens	24
Brain specimens	16
Symphys apus	1
Hare lip and cast.....	1
Double aorta.....	1
Head sections.....	42
Comparative anatomy: ostrich, bear, turtle, opossum, snake, pig, ox, horse, deer, sheep.....	20
Pelvic skiagraphs (Robinson).....	11
Students' theses.....	36
Total	175

This was one of the most extensive exhibits presented. Particularly valuable were the dissections and head sections. These were of a nature and accuracy rarely encountered, and in justice to all concerned it should be stated that they were prepared by the students of the college.

The 36 cases of theses represent the regular work of the students.

DR. ROBERT ABBE, NEW YORK.

Chronic latent appendicitis.....	10
Obliterating appendicitis.....	10
Single tight strictures, appendix.....	10
Concretions beyond strictures, appendix.....	5
Gangrene beyond strictures.....	5
Acute septic follicular ulcer of appendix.....	14
Graphic and easy method of illustrating and demonstrating retrograde changes in inoperable cancer of breast during treatment with x-ray, by means of plaster casts.....	3
Total	57

This collection is not only remarkable for its elaborateness, but for the excellency of their mountings, affording as they do perfect demonstrations of the various lesions of the appendix.

MILWAUKEE MEDICAL COLLEGE, DRS. WUERDEMANN AND BLACK.

Sections of eye in glycerin.....	80
Collection of photographs illustrating a study of multiple angio-sarcoma	1
Pathological specimens.....	7
Drawings	7
Microscopical mounts.....	7
Photographs illustrating eye lesions.....	36
Total	138

Particularly worthy of mention in this collection was the series of mounts of the eye.

DR. EVANS, LA CROSSE, WIS.

Illustrative cases of cholelithiasis.....	12
These sets of stones were neatly displayed in a case specially prepared and afforded an excellent demonstration of this lesion.	

BROOKLYN HOSPITAL, N. Y., DR. SHERWOOD.

Photographs of patient with pellagra or Italian leprosy.....

DR. T. C. MARTIN, CLEVELAND, OHIO.

Pathologic specimen, congenital valvular obstipation.....
Drawings, lesions rectal mucosa.....

ALBANY MEDICAL COLLEGE.

Skull: Cranial syphills.....	1
Inferior maxilla: Necrosis from absorption of phosphorus through cavity of decayed tooth.....	1
Spinal column: Caries of vertebrae.....	1
Ankylosis of vertebrae.....	1
Fracture and distortion of vertebrae.....	1
Tuberculosis of vertebrae.....	1
Fracture of vertebrae.....	1
Humerus: Ankylosis with scapula.....	1
Humerus: Fractures	1
Elbow-joint ankylosis	1
Radius and ulna: Syphilitic hypertrophy.....	1
Radius and ulna: Syphilitic periostitis.....	1
Radius and ulna: Exostosis with ankylosis.....	1
Radius and ulna: Fracture	1
Femur: Simple fracture	1
Femur: Fracture and distortion.....	1
Femur: Impacted fracture of head.....	1
Femur: Oblique fracture	1
Femur: Fracture and necrosis.....	1
Femur: Fracture and absorption.....	1
Femur: Necrosis	1
Femur: Caries and necrosis.....	1
Femur: Abscess and caries.....	1
Femur: Distortion and softening.....	1
Femur: Syphilitic hypertrophy	1
Morbus coxae	1
Femur and tibia: Arthritis deformans.....	1
Knee-joint caries	1
Knee-joint ankylosis	1
Tibia: Fracture	1
Tibia: Distortion and softening.....	1
Tibia: Necrosis	1
Tibia: Caries and atrophy.....	1
Tibia: Syphilitic hypertrophy	1
Tibia and Fibula: Distortion and softening.....	1
Tibia and Fibula: Fracture	1
Tibia and Fibula: Fracture without treatment.....	1
Tibia and Fibula: Periostitis from chronic ulcer of leg.....	1
Tibia and Fibula: Caries	1
Foot: Caries of tarsus, metatarsus and phalanges.....	1
Total.....	

This extensive collection consisted of the dried specimen neatly mounted on wooden bases on each of which the diagnosis was plainly printed. In the writer's experience, there are no medical colleges which possess so extensive and comprehensive a collection of specimens illustrative of bone lesions.

CINCINNATI HOSPITAL MUSEUM.

Lungs: Normal.....	1
Lungs: Sarcoma	1
Lobar pneumonia, red hepatization.....	1
Lobar pneumonia, gray hepatization.....	1
Simple pleurisy	1
Tuberculosis	1
Heart lesions	1
Total.....	

NEW YORK POLYCLINIC LABORATORY, F. M. JEFFRIES.

A collection of interesting microscopic mounts:	
Lymph-gland infiltrated with thyroid tissue.....	1
Endothelioma of breast.....	1
Sclerosis of penis with ossification.....	1
Adeno-chondroma of parotid.....	1
Large round celled sarcoma of leg.....	1
Dermatitis papillaris capillitii.....	1
Struma supracrenalis of kidney.....	1
Syphilis of tongue	1
Epithelioma from a horse.....	1
Mixed celled sarcoma from a canary bird.....	1
Fatty embolus in lung following fracture of rib.....	1
Granular epidymitis	1
Deciduoma malignum	1
A rare form of hemorrhagic sarcoma from a boy with multiple tumors	1
Colloid carcinoma primary in breast.....	1
Struma hyperplastica, thyroid	1
Intramural fibroma, intermural myoma and epithelioma, all from one uterus.....	1
Gumma of intestine.....	1
Tubercular uterus from child.....	1
Muscular cavernoma	1
Carcinoma of appendix, primary.....	1
Petechial hemorrhage cerebellum, malaria.....	1
Endothelioma of lung.....	1
Total.....	

INDIANA STATE MEDICAL SOCIETY, FRANK B. WYNN, INDIANAPOLIS.

Aneurisms.....

These represented the extremes in size and the various types. One very large one showed lamination most beautifully.

Vesical calculi

One of these was formed about chewing gum; another about a pipe-stem; one weighing 4¾ ounces was removed from a patient of ten years; and 35 of them were obtained by operation in a missionary hospital in Persia.

Enteroliths..... 4
These were as large as small hen's eggs; one was sloughed through the abdominal wall, two passed by the rectum, and one obtained postmortem.

Hair balls, renal calculi, etc., from lower animals..... 10
Very remarkable in this group was an immense hair-ball ten inches in diameter, composed of hog-hair and obtained from an ox which had grazed upon a pasture field where hog-hair had been strewn.

Miscellaneous specimens 8
Total..... 72

Among other interesting things, this contained a mortar which belonged to the surgeon of Lafayette; also a skull trephined by Baron Larrey, chief surgeon of Napoleon I, in his campaign against Moscow.

The Indiana State Medical Society is entitled to the distinction of being the pioneer in the pathologic exhibit idea, having had such an exhibit at its annual meetings for five years past, and being the first to make an exhibit at the meeting of the American Medical Association. This was at the Columbus meeting in 1899, when some 300 specimens were shown. The good example set was followed by the inauguration of a Pathologic Exhibit at the Atlantic City meeting, and the adoption of the idea by other state societies.

DR. J. F. SCHAMBERG AND DR. J. F. WALLIS, PHILADELPHIA.
Wax models of cutaneous diseases..... 21

DR. B. M. RANDOLPH, PHILADELPHIA.
New cabinet for microscopic slides, designed by the late Thos. S. Kirkbride 1

DR. GAYLORD T. CLARK, MEDICAL DEPARTMENT, SYRACUSE UNIVERSITY.
Apparatus demonstrating the action of the aortic and mitral valves..... 1

This apparatus, designed and made in the college, most effectually attained the ends desired and allowed the complete observation of the valves in action. A bullock's heart was mounted and with cleverly devised water tubes systolic and diastolic rhythm was obtained. This exhibit proved to be one of the most attractive exhibits.

PATHOLOGIC LABORATORY, RUSH MEDICAL COLLEGE, CHICAGO.
Cystic sarcoma of bone..... 1
Cardiac cirrhosis..... 1
Chronic hyperplastic splenitis..... 2
Hyperplastic tuberculosis of great omentum..... 1
Unilateral arteriosclerotic atrophy of kidney..... 1
Papillary tumor of the gall bladder, accompanying calculi..... 1
Chronic caseous nodular tuberculosis of the liver..... 1
Secondary carcinoma in the subpleural lymph..... 1
Chronic hyperplastic pleuritis..... 1
Polypus of the pharynx..... 1
Septic thrombo phlebitis of the ovarian vein..... 1
Diffuse infiltrating and nodular secondary melano-sarcoma of the liver..... 1
Primary diffuse round-celled sarcoma of the pericardium..... 1
Chronic hyperplastic tuberculosis of the cecum..... 1
Metastatic melano-sarcoma of the lymph nodes in the ileum..... 1
 poisoning..... 1
 stomach..... 1
 in lung of dog..... 1
Cast of trachea and bronchi..... 1
Primary carcinoma of the lung..... 1
Primary carcinoma of the esophagus..... 1
Cysticercus cellulosus from brain and spinal cord..... 1
Metastatic carcinoma nodules of the diaphragmatic surface of the left lung..... 1
Multiple fibromas of the left sciatic nerve..... 1
Multiple fibromas of the right sciatic nerve..... 1
Ascending pyelonephritis with carcinoma of bladder..... 1
Tuberculous cysto-utero-pyelitis..... 1
Chronic hyperplastic splenitis with large areas of caseous tuberculosis..... 1
Primary sarcoma of the spleen..... 1
Chronic tuberculosis of the skin..... 1
Chronic gastritis with production of the "état mamelonné"..... 1
Skeleton of a Madura foot..... 1
Bovine actinomycosis, inferior maxilla..... 1
Specimen illustrating adaptation of the tail for support following traumatic removal of right hind extremity in a rat..... 1
Sarcoma of the spinal meninges..... 1
Fat necrosis from a case of gangrenous pancreatitis..... 1
Cyst of the urachus..... 1
Hemorrhagic pancreatitis..... 1
Sarcoma of the bladder with calculus..... 1
Esophageal diverticulum formed by extension of an abscess of a peribronchial lymph gland..... 1
Slices of tumor-like growth occurring in bovine actinomycosis..... 1
Hypernephroma..... 8
Hypertrophy of the prostate, diverticula of the bladder, vesical calculi..... 1
Malignant hypernephroma..... 1
Metastatic growth with myocardium..... 1
Perforation of the bronchus from suppuration in a peribronchial lymph gland..... 1
 of the skin..... 1
 abortion..... 1
 dules ileum..... 1

Primary carcinoma of the Fallopian tube..... 1
Ulcerative colitis from a case of amebic dysentery..... 1
Stomach from a case of carbolic poisoning..... 1
Dentulous cystoma inferior maxilla..... 1
Multiple secondary carcinoma of the lung..... 1

Total 62

This was one of the most extensive and valuable exhibits. The collection embraced material covering a wide field of research-work and the mounts were of the highest type of perfection.

DR. J. F. SCHAMBERG, PHILADELPHIA.
Skin of hemorrhagic smallpox, preserved in Kaiserling's fluid in hermetically sealed cells..... 1
Skin of smallpox, fourth day..... 1
Skin of smallpox, seventh day..... 1
Skin of smallpox, eighth day..... 1
Skin of smallpox, hemorrhagic..... 1

Total 5

DR. M. K. KASSABIAN, IN CHARGE OF ROENTGEN-RAY LABORATORY OF THE MEDICO-CHIRURGICAL COLLEGE AND HOSPITAL OF PHILADELPHIA.

A series of skiagrams: Various stages of pulmonary tuberculosis, aneurism of aorta, displacement of heart, foreign bodies in brain and eye, renal and vesical calculi, every variety of fracture and dislocation and endeavors with injected circulatory and respiratory systems..... 100

DR. DAVID RIESMAN, PHILADELPHIA.
Mounted sections of pancreas, lung and kidney with calcareous infiltrations from a boy aged 3 years with synostosis of skull 3

DR. HERBERT C. EMERSON, SPRINGFIELD, MASS. (PRIVATE COLLECTION.)
A series of appendices mounted in Kaiserling's fluid and showing various pathologic lesions..... 30
A series of charts showing laboratory outfits (diagnostic) for pathologic, hematologic and bacteriologic specimens..... 8

Total 38

Very attractive was the collection of appendices which were mounted in a manner quite original and calculated to best show the specimens.

LABORATORY OF THE STATE LIVE-STOCK SANITARY BOARD OF PHILADELPHIA.
Spleen of calf inoculated with human tubercular sputum..... 1
Tissues of rabbit with nodules from inoculation with timothy grass bacillus..... 1
Lung of dog inoculated with culture of tuberculosis from mesenteric gland of child..... 1
Viscera of monkey fed with cultures of tubercle bacilli from mesenteric gland of child..... 1
Lung of cow showing cavity formation, infected experimentally by feeding..... 1
Tubercular larynx of cow..... 1
Lungs of pig fed with cultures of human tubercle bacilli..... 1
Various organs showing results of experimental work with cultures of human tubercle bacilli..... 10
Viscera of monkey fed with bovine tubercle bacilli from milk..... 1
Lung of goat infected with human tubercle bacilli..... 1

Total 19

GRAND TOTAL..... 1528

Medical Organization.

Membership in State Societies.

One of the fundamental principles in the new plan of organization—new except in a few states—is that membership in the county society carries with it membership in the state society. A few physicians—happily only a few—object to this. Not that they object to the membership, but they are not willing to pay, directly or indirectly, their share of the expenses incurred by the state body. As this is the main objection, on the part of those who have not heretofore supported the state society, to the systematic plan now going into effect, it may be well to consider it for a moment.

In the first place we must have a clear appreciation of the duplex character of the reorganized state society. It will consist of: 1, a legislative or business body, called in most states the House of Delegates; 2, the scientific branch, which thus far has received no distinctive name, but which we may call the General Meeting.

THE HOUSE OF DELEGATES.

The House of Delegates is made up of duly elected representatives of the county societies. This body makes and amends the constitution and by-laws, transacts all the business, elects the officers, etc. It will, if it does its duty, see that laws affecting the profession are enforced, and will engage lawyers for this purpose. It will, if it thinks it ad-

visible, appoint committees to try to have the laws regulating medical practice made what they should be, to inquire into conditions affecting the profession and the public, and to aid the county societies to be of practical benefit to their members and to the profession. In a word, its function will be to represent and act for the profession of the state in every way as circumstances dictate, and as conditions require, and to spend money as may be necessary to accomplish these objects. In point of fact, and this should be clearly and distinctly understood, the House of Delegates of a state society is the state society in the eyes of the law. This being so, then it naturally follows that the members of the state society, strictly speaking, are those who are elected as such by the component societies. We realize that this is a quibbling with terms, and that few will be willing to acknowledge that the General Meeting is not the state society. We state the matter in this way, however, more to emphasize the importance of the legislative body in the eyes of the law over the General Meeting.

THE GENERAL MEETING, OR THE STATE SOCIETY.

The functions of the General Meeting are scientific, or educational and social, and are thus entirely distinct from those of the House of Delegates. The General Meeting transacts no business and spends no money, neither is there any expense connected with the meeting, except that which is incurred in getting up and circulating the program—a very small item. Usually the halls for the meetings are provided by the local profession, assisted or not by the citizens. In other words, there is so little expense connected with the General Meeting as a scientific body that practically no "state society dues" would be necessary to keep it up. (We purposely omit the consideration of the expense of publishing the papers and discussions, whether in journal or book form, leaving that for a future consideration.)

Who are members of this larger body, the state society or General Meeting, whichever title is preferred? Who has a right to attend its meetings? Under the new scheme of organization every member of every component society has a right to attend and participate in these meetings; in other words, is a member of the state society. No certificate will be required of a member of a county society when he attends the state society meeting, no formal application, only his name must be on the roster of the county society of the county in which he lives. One would think that there could be no objection to this. One of the great desires of those who have charge of scientific meetings, whether national, state or district, whether special or general in their character, is to have a large attendance. Consequently, the state societies in the past have striven in every way possible to get a large attendance, and even those who were not members were invited to attend the meetings, although they had no right to take part. Every respectable physician has been made welcome, and even a homeopath or an eclectic would not be ordered out should he happen in. No one will deny that it should be the object of the officers of a state society to get every physician in the state to attend its meetings, for the reason that it will be beneficial to all concerned. Neither the payment of dues nor going to the trouble of making formal application should be put in the way of those whose attendance is desired. The state society is not a select body, and never has been so considered. The majority of the states have always accepted, without reference to a committee or anything else, those who come delegated from a county society. The fact that they were members of such a society was satisfactory evidence that they were fit for membership. Hence, we can not understand that there can be any possible objection to allowing every physician who belongs to a county society to attend the General Meeting—the state society—without any formality.

The only objection is that referred to at the beginning of this article, namely, that certain members of county societies object to paying their share of the expenses. And yet how narrow, how selfish, and how unappreciative of his duties as a member of a great profession must be the physician who would refuse to contribute his share toward the sum required to

carry on the work hinted at above, a work that is as much for his interest as for the good of any other member, whether he attends and gets the benefit of the scientific general meetings or not.

To recapitulate:

1. The House of Delegates is made up of those selected by the county societies, every member having a voice in this selection. It thus becomes the mouthpiece of the members of the county societies to voice their sentiments and to express their desires. At the same time, it does or does not, according to the wishes of the county societies, carry out certain works which require the expenditure of money. It is only right that every physician who has a choice in electing those who constitute the House of Delegates should pay his share of the money thus appropriated.

2. The annual meeting of the state medical society—the General Meeting—is a convention of the members of the county societies for social, scientific and educational purposes. Every member in good standing of a component society is a member of this state society, and has a right to attend, and participate in its deliberations. The expense connected with the general meeting is practically nil.

3. Since there is practically no expense connected with the annual meeting of the state society—the General Meeting—practically none of the "state society dues" will be needed for the purpose of paying such expense, and the "state society dues" will be used for the benefit of the profession of the whole state. Hence, because a physician never attends the annual meeting is no reason for his not paying his proportion of the funds used for the general good of the profession, himself included.

Vermont State Medical Society.

Commenting on the recent meeting of the Vermont State Medical Society, which was the first one held since that body was reorganized, the *Vermont Medical Monthly* says, editorially: "The House of Delegates provided by the reorganization, assumed the business of the society, and much satisfaction was felt for the new régime. All business was transacted smoothly and unobtrusively, without the slightest interference with the scientific work of the society. The personnel of the House of Delegates assures the success of the plan, for it is evident that the highest interests of the society are in safe hands."

Cass County (Mo.) Medical Society.

Pursuant to a call issued by Drs. Jacob S. Triplett and M. P. Overholser, Harrisonville, the physicians of Cass County met at Harrisonville, November 6, and organized a county medical society, in accordance with the rulings of the State Judicial Council. The following officers were elected: President, Dr. Harold Jerard, Pleasant Hill; vice-presidents, Drs. Frank B. Ellis, Garden City, and George E. Elly, West Line; treasurer, Dr. Aaron R. Elder, Harrisonville, and secretary, Dr. Jacob S. Triplett, Harrisonville. Cass County formerly was in the territory of the Hodgen Medical Association, composed of the counties of Cass, Bates and Vernon.

Cass County (Ill.) Medical Society.

The physicians of Cass County met in Virginia, November 13, and formed a county medical society. Dr. Carl E. Black, Jacksonville, called the meeting to order. The constitution and by-laws suggested for county societies by the American Medical Association were approved. The following officers were elected: President, Dr. James A. Glenn, Ashland; vice-president, Dr. George Bley, Beardstown; secretary, Dr. John A. McGee, Virginia, and treasurer, Dr. John G. Franken, Chandlerville.

Allegan County (Mich.) Medical Society.

The physicians of this county met at Allegan, November 6, and organized this society. Drs. William H. Haughey, Battle Creek; George W. Lowry, Hastings, councilors, and James M. Elliott, Hickory Corners, members of the Michigan State Medical Society, were present to assist in the work. The officers elected were: President, Dr. Walter H. Bills, Allegan; vice-president, Dr. Milton Chase, Otsego, and secretary and treasurer, Dr. William S. Albright, Allegan.

Ingham County (Mich.) Medical Society.

On November 13, the Central Michigan Medical Society met at Lansing and disbanded. The members immediately organized the Ingham County Medical Society, adopted the constitution and by-laws recommended by the American Medical Association, and elected the following officers: Dr. Sidney H. Culver, Mason, president; Dr. Harry A. Haze, vice-president, and Dr. L. Anna Ballard, Lansing, secretary and treasurer.

Medical Society of Renville-Chippewa-Lac qui Parle and Yellow Medicine Counties, Minnesota.

Physicians of these counties met at Granite Falls, October 22, with Dr. William S. Fullerton, St. Paul, state organizer, and formed this society, with the following officers: President, Dr. William M. Stratton, Granite Falls; vice-president, Dr. Charles E. Rogers, Montevideo; secretary, Dr. Eric O. Gier, Madison, and treasurer, Dr. Franklin J. Cressy, Granite Falls.

Oconto County (Wis.) Medical Society.

This society was formed, November 7, at Oconto Falls, and constitution and by-laws as laid down by the American Medical Association for county societies were adopted. Dr. Herman F. Ohswaldt, Oconto Falls, was elected president and Dr. A. S. White, Gillet, secretary.

St. Joseph (Mo.) Medical Society.

This society, at its meeting, October 29, adopted a new constitution and by-laws. The dues have been fixed at \$4 a year, which includes the dues of the state society. It will be a branch of the Missouri State Medical Association.

Societies.

COMING MEETINGS.

Indian Territory Medical Association, Muskogee, Dec. 2-3, 1902.
Western Surgical and Gynecological Association, St. Joseph, Mo., Dec. 29, 1902.

The Tri-State Medical Association of West Virginia, Western Maryland and Pennsylvania will meet at Cumberland, Md., December 4. Dr. William Q. Skilling, Lonaconing, Md., is president.

Sanitary Convention of American Republics.—This convention will be held in Washington, D. C., beginning December 2, under the auspices of the governing board of the Bureau of American Republics.

Kanawha County (W. Va.) Medical Society.—At the annual meeting of this society, Dr. John T. Cotton was elected president; Dr. Harry H. Young, secretary, and Dr. Timothy L. Barber, treasurer, all of Charleston.

Sioux City (Iowa) Medical Association.—At the annual meeting of this body November 13, Dr. John P. Savage was re-elected president, Dr. John N. Warren elected vice-president, and Dr. Guy C. Rich, secretary and treasurer.

Congress of American Physicians and Surgeons.—The sixth meeting of the congress will be held in Washington, D. C., May 12, 13 and 14, 1903. Dr. William W. Keen, Philadelphia, is president, and Dr. William H. Carmalt, New Haven, Conn., secretary.

Sangamon County (Ill.) Medical Society.—At its annual meeting in Springfield, November 10, Dr. Albert L. Brittin, Athens, was elected president; Dr. B. Barret Griffith, Springfield, vice-president, and Dr. Percy L. Taylor, Springfield, secretary and treasurer.

Medical and Chirurgical Faculty of Maryland.—At the first session of the Section on Neurology and Psychiatry Dr. George J. Preston was elected president for the ensuing year. Dr. Henry M. Hurd read a paper on "The Future of the Care of the Insane in Maryland."

Hill County (Texas) Medical and Surgical Association.—At a meeting of this society in Hillsboro, November 13, Dr. James W. Miller, Hillsboro, was elected president, vice Dr. James J. Robert, resigned, and Dr. Andrew C. Saylor, Bynum, vice-president, succeeding Dr. James A. Adams.

Johns Hopkins Hospital Historical Club.—At the last meeting of this society Dr. Henry M. Hurd read a paper on "Thacher's Military Journal," and Dr. Eugene F. Cordell, a paper on "The Letters of Andrew Wiesenthal While a Student in London, 1786-1789." Dr. Cordell was elected president.

Inter-County (Wis.) Medical Society.—At the annual meeting of this society, held in Eau Claire, November 18, the

following officers were elected: President, Dr. E. Lewis Fletcher, Eau Claire; vice-presidents, Drs. William B. Hopkins, Cumberland, and Frank W. Epley, New Richmond, and secretary and treasurer, Dr. Caroline Hedger, Eau Claire.

Frederick County (Md.) Medical Society.—At the annual meeting of this society in Frederick, the following officers were elected: President, Dr. Franklin B. Smith, Frederick; vice-presidents, Drs. Charles C. Walker, Walkersville, and D. Edwin Stone, Mount Airy; secretary, Dr. Ira J. McCurdy, Frederick; treasurer, Dr. William C. Johnson, Frederick, and librarian, Elmer Fahrney.

California Northern District Medical Society.—At its twelfth annual meeting, held in Marysville, November 11, this society elected the following officers: President, Dr. Edward W. Hanlon, Marysville; vice-presidents, Drs. Harry W. Taggart, Stockton, Frank B. Sutcliffe, Sacramento, and Joseph T. Harris, Gridley; secretary, Dr. Elmer E. Stone, San Francisco, and treasurer, Dr. Oscar Stansbury, Chico.

Washington County (Md.) Medical Society.—This society, at its annual meeting in Hagerstown, November 12, elected the following officers: President, Dr. Japhtha E. Pitznogle, Hagerstown; vice-presidents, Drs. Christian R. Scheller, Hagerstown, and Charles D. Baker, Rohrer'sville; recording secretary, Dr. William B. Morrison, Hagerstown; corresponding secretary, Dr. James W. Humrichouse, Hagerstown, and treasurer, Dr. Hamilton K. Derry, Hagerstown.

Plant System Medical and Surgical Association.—The second annual meeting of the surgeons of the Plant System was held in Charleston, S. C., November 12 and 13. The following officers were elected: Dr. Roberts P. Izlar, Waycross, Ga., president; Drs. William D. Sutherland, High Springs, Fla., and Thomas S. Clay, Savannah, Ga., vice-presidents, and Dr. James H. Latimer, Waycross, Ga., secretary and treasurer. The association will meet next year in Jacksonville, Fla.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

Fifteenth Annual Meeting, held in Cincinnati, Nov. 11-13, 1902.

Under the Presidency of Dr. W. E. B. Davis, Birmingham, Ala.

(Concluded from page 1340.)

McGraw's Method of Gastroenterostomy.

DR. SAMUEL LLOYD, New York, read a paper on his personal experience with this method. He reported 7 cases, all for cancer, except one, who had a gastric stricture due to adhesions. All recovered from the operation, but 4 died later from progress of the growth, without signs of obstruction. One died from involvement of the anastomotic opening in the cancerous growth, and consequent secondary closure of the new opening. The writer said that his experience showed the method to be efficacious and rapid. It had advantages over the button, in that the ligature, after it was tied, was extremely small and readily passed through the intestine, avoiding the danger of a heavy mass retained in an already diseased and ulcerated viscus, and that the opening in the stomach could be regulated to suit the case in hand.

The method was also applicable to the enteroenterostomies, which were made to avoid the vicious circle, and probably to cases of incomplete intestinal stenosis. It was not applicable to complete obstruction. Feeding could be commenced at the end of about forty-eight hours, and could be increased from day to day. He advocated in operating for pyloric obstruction, that from eight to ten ounces of peptonized milk and one ounce of whisky be introduced through a needle into the intestine below the point of the anastomosis during the operation.

The Surgery of the Lower Ureter.

DR. HUGH H. YOUNG, Baltimore, first described the topographic anatomy of the lower ureter.

The conditions requiring surgical treatment are as follows: Anomalies, as to number, location and condition; prolapse; ureteritis; calculus; neoplasm; valve formation; stricture; and fistula. The anomalous terminations into the uterus, vagina and vulva have been successfully transplanted into the bladder, but no similar operation is recorded in the male.

Prolapse of the ureter into the bladder is rare. Only 19 recorded cases have been found in the literature. Only 2

cases were operated on, and one died. The writer reported a case of his own.

Ureteritis in the lower ureter is not different from that in the upper, except that it is much more apt to lead to stenosis at the lower end. The changes observed on cystoscopic examination were discussed at length, with a report of the findings in several cases. Calculus impacted just above the bladder or in the intramural portion can generally be diagnosed at once by the cystoscopic appearance of the orifice; congestion, bulging, stenosis, with prolapse of the papilla generally being present. Likewise, tuberculosis can be recognized. In lesions of even lesser degree the orifice generally gives evidence as to which is the affected side.

Fistula of the ureter may be congenital or acquired, the latter generally occurring in the female after labor or pelvic operations. Anastomosis of the divided ureters or implantation into the bladder should be done. The ureteral papilla and its immediate neighborhood in the bladder is a favorite seat for vesical tumors.

Calculi which have passed the two points of constriction of the upper ureter just below the renal pelvis, and at the crossing of the iliac vessels, are most apt to lodge at the vesical juncture, or at the intravesical end, although they sometimes lodge in the intramural portion, or in the para-ischia bend. In the female, the intialigamentous portion of the ureter is a favorite location for calculi, and numerous cases are on record in which they have been removed through the vagina.

In the male, only 20 cases in which calculi impacted in the deeper pelvic ureter had been removed by operation were found in the literature, and 10 of these were intravesical or intramural, and were removed through the bladder. In the other 10 the site of impaction was above the bladder, in some part of the pelvic course of the ureter. In one of these the stone was removed by incision through the rectum, with fatal result. In another, the incision was made in the perineum, the rectum pushed back from the prostate, the ureter exposed at its vesical juncture and calculus extracted. Fenwick, the author of this operation, claims that this is the method of choice in the male. In the other 8 cases the calculi were removed through the iliac extraperitoneal route, 5 by European operators, and 3 in Baltimore. In the 2 cases of the writer, the calculus was situated in the justo-vesical portion of the ureter, but was very easily removed by the iliac extraperitoneal route. Finney had a similar case.

As to choice of route, it was clearly demonstrated that for all stones in the pelvic ureter, the iliac extraperitoneal route was the best, with the possible exception of the last three centimeters of the ureter in the female, where the close proximity of the vagina made that route an easy one. The difficulty of suturing the ureter here, the inability to examine the kidney above, or to treat stricture below, and the frequent persistence of fistula afterward might yet prove that the iliac route was the best for all cases above the bladder in the female also. Stricture of the ureter was rare, and only those cases requiring more than dilatation with ureter catheters were on record.

Indications for Extirpation of the Gall Bladder.

DR. MAURICE H. RICHARDSON, Boston, read a paper on this subject, in which he drew the following conclusions:

1. New growths and gangrene demand removal of the gall bladder whenever possible.

2. Contracted, thickened and inflamed gall bladders and all which do not permit of easy and efficient drainage should be extirpated, for in such cases the risks of drainage are as great as of extirpation.

3. Drainage is preferable in the dilated and infected or slightly thickened gall bladder containing stones and infected bile. This will, after drainage, become capable of fulfilling the functions again.

4. As a rule, drainage rather than extirpation is demanded in acute cholecystitis with severe constitutional symptoms, when the bladder is dilated or at least not contracted.

5. In chronic infections with dilatation and thickening, especially when a stone is impacted in the cystic duct, extirpation is preferable unless the stone can be dislodged backward into

the gall bladder, in which case drainage is, if not preferable, quite as advantageous as extirpation.

6. In simple gallstones, without visible evidence of infection, or of chronic changes incompatible with complete restoration of function, simple drainage is indicated.

7. In chronic pancreatitis, associated with gallstones or not, drainage through the gall bladder is indicated.

DR. ALEXANDER HUGH FERGUSON, Chicago, described a new method of anterior transplantation of the round ligaments for displacements of the uterus.

DR. GEORGE H. NOBLE, Atlanta, presented a paper on intramural extraperitoneal anchorage of the round ligaments for posterior displacements of the uterus, describing a new method for the relief of these displacements.

Fixation of the Round Ligaments.

DR. F. F. SIMPSON, Pittsburg, described a method of changing the course of the round ligaments from transverse to nearly an antero-posterior direction; in shortening the round ligaments, so that the weak part is left as slack, the strong part being used to control the movements of the uterus; finally, and especially in effecting these changes beneath or by puckering the parietal peritoneum, thus leaving no bands of adhesions, and no pockets which may strangulate an intestine.

Gas Bacillus Infection.

DR. ROBERT T. MORRIS, New York, reported three cases. The first was 46 years of age, on whom he operated for uterine myoma. The next day signs of infection appeared. On the third day he examined the abdominal wound and found it had healed by primary intention. The subcutaneous tissues on the right side of the abdomen were distended with gas, which was unassociated with tenderness, but on the fourth day caused great distress. He had no bacteriologic report. The patient died on the seventh day. In the second and third cases specimens submitted for examination showed pure cultures of what appeared to be the *Bacillus aerogenes capsulatus*. These two recovered:

DR. ALEXANDER H. FERGUSON detailed two cases. He said the *B. aerogenes capsulatus* had its habitat in the soil, and was not unlike *B. tetanus*, microscopically. It is not a pyogenic organism, as was proven by Welch and Nuttall, who made extensive experiments with it. It is the *B. emphysematosus* of the Germans. It finds its way into the body on greens, cabbage, etc., and one important point is to clean out the alimentary canal to get rid of it. Another important point is that it finds its way into the wound from the fingernails, hence the great importance of scrubbing the nails.

DR. J. WESLEY BOVÉE had encountered three cases following removal of the appendages for pus. One died. Autopsy showed the gas bacillus in various portions through the viscera, and particularly in the liver and skin.

Prolapse of the Uterus.

DR. CHARLES R. ROBINS, Richmond, Va., said the uterus is normally maintained in position by a combination of elements, and not by any one. These are integrity of the pelvic floor, making the pelvis a closed cavity, the uterus being of the same density as the other pelvic viscera, the position of anteversion and the tonicity of the abdominal walls. A departure from any one of these may cause prolapse, and where several are concerned, it is most frequent. Successful treatment can not depend on any one procedure, but it must meet all of the pathologic conditions present. Proper preliminary treatment is of the utmost importance. The operative treatment recommended consisted of amputation of the cervix, operation for cystocele, perineorrhaphy, and an operation for maintaining anteversion. This treatment not only cures prolapse, but restores function. If relapse occurs, Edebohl's panhysterokolpectomy seems to be the only operation for effecting a cure.

Diseases of the Ribs Following Typhoid Fever.

DR. J. SHELTON HORSLEY, El Paso, Texas, reported a man of 40 years, in whom disease of the left sixth and seventh costal cartilages, the anterior end of the sixth rib, and part of the sternum developed a few weeks after typhoid. The abscess

had been opened, and later the resulting sinus curetted before the patient came under Dr. Horsley's care. Then two extensive resections, involving a portion of the sixth rib, the costal cartilage of the sixth and seventh ribs and part of the sternum had to be performed before a complete cure was effected.

He called attention to five peculiarities that distinguish post-typhoid disease of the ribs from similar affections of other bones: 1. The marrow of the ribs is a particularly favorite seat for the typhoid bacilli. 2. The superficial position of the ribs and their continuous movement make a *locus minoris resistentiæ* more liable here. 3. Necrosis of the ribs is rare, of other bones, not. 4. Post-typhoid disease of the ribs invariably occurs in adults. 5. Thorough operative treatment is more difficult in the case of the ribs than of most other bones.

A table of 48 cases consisted of 41 men and 7 women. This is accounted for by men being more often subject to typhoid, and also by the fact that, owing to the mammary, the blood supply of the ribs is better in women.

Conservative treatment was advised in mild cases. If this should be unsuccessful, incision and curettage were advocated; and if, after a few weeks, the wound had not healed, extensive resection, going well into apparently healthy bone, should be practiced. Dr. Horsley also demonstrated a new holder for Gigli saws.

Renal Calculi.

DR. MACK ROGERS, Birmingham, Ala., confined himself to the diagnosis and treatment. He reported two cases and said the clinical history, pain, tenderness, swelling and condition of urine were the chief guides in diagnosis.

Endometritis.

DR. H. J. BOLDT, New York, said that the glandular, interstitial and mixed varieties form the basis of all variations of the disease. He outlined the differences between the varieties. The local treatment giving the promptest relief from bleeding in chronic endometritis is undoubtedly the judicious use of the curette. The operation should be done by one trained in gynecologic technic, because serious results frequently follow its improper employment. It is imperative that a careful bimanual examination be made previously, to determine whether or not a tubal swelling is present. Boldt had known tubal pregnancy and pyosalpinx to be ruptured by the operation. The same precautions as to cleanliness should be employed as in a major operation. In the writer's experience, about 60 per cent. were relieved from atypical bleeding for a variable period of time.

Good food, proper exercise, baths, douches, medicated or plain warm water are all important adjuvants to the treatment. After the endometritis has become chronic, it should be treated with intrauterine applications of one of the usual remedies. Dr. Boldt preferred a 10 per cent. solution of carbolic acid. Frequent intrauterine irrigations with large quantities of a mild antiseptic solution also give good results.

The Electric Caustic Clamp in the Treatment of Cancer of the Uterus.

DR. CHARLES P. NOBLE, Philadelphia, said the electric caustic clamp is a highly perfected and practicable instrument whereby it is entirely feasible to burn the attachments of the uterus and to leave not only a bloodless field, but one in which the lymphatics are sealed by a thorough cooking or roasting process. Hysterectomy thus performed possesses all the advantages of previous methods, and has in addition certain special advantages: More tissue outside of the uterus is removed or cooked than by the classical methods. All the connections of the uterus are either severed through tissue cooked in the bite of the caustic clamp, or severed with the electric caustic knife. The lymphatic vessels are sealed. Risk of implantation of cancer on the field of operation is greatly lessened. (An exception to the above statements must be noted, in that the attachments of the bladder to the uterus are severed in the usual way.) Much less blood is lost than is usual with the classical technic. A dry, bloodless field is left.

Dr. Noble said Dr. A. J. Downes, Philadelphia, adopted the

licable electric caustic clamp. Dr. Downes uses the method wherever there are pedicles to deal with, having abandoned the ligature in favor of the caustic clamp.

The technic was described in detail. [See description and illustrations in *THE JOURNAL*, July 12, 1902, p. 75.]

The essayist has operated five times by this method.

In closing, the essayist said that some years must elapse before the actual value of the clamp could be determined, but it was reasonable to expect a larger percentage of cures than the older methods, more especially in cancer of the cervix.

Other Papers Read.

The following papers, whose authors were present, were read by title, owing to the limited time at the disposal of the association: "A Case of Ovarian Fibroma," by Dr. H. A. Royster of Raleigh, N. C.; "Fracture of the Spine, with Report of Three Cases," by Dr. Howard J. Williams of Macon, Ga.; "Spinal Analgesia," by Dr. E. D. Martin of New Orleans, La.; "The Treatment of Posterior Uterine Displacements," by Dr. Edward McGuire of Richmond, Va., and "Dependent Drainage in Acute and Extensive Intra-Pelvic and Intra-Peritoneal Infection in Men by Incising the Perineum Separating the Rectum from the Prostate and Bladder, and Puncture of the Recto-Vesical Pouch of the Peritoneum," by Dr. Hugh M. Taylor of Richmond, Va.

BUFFALO ACADEMY OF MEDICINE.

Regular Meeting of the Medical Section, held Nov. 11, 1902.

Dr. Albert E. Woehnert in the Chair.

Medical Discoveries by Non-Medical Men.

DR. GEORGE M. GOULD of Philadelphia read a paper with this subject. He alluded to that grand sanitarian, Moses, and the effects of the Mosaic laws on the preservation of the Hebrew race. He quoted many paragraphs from the Bible to illustrate that medicine and hygiene must have been well known in biblical times, even bubonic plague and leprosy were well described. He spoke of the many therapeutic measures used even to-day referred to in the Talmud. We are just beginning to realize the truths of the Mosaic laws.

Reference was made to the Persians who regard the rivers as sacred and who do not bathe nor empty sewage into them.

He credited one Benjamin Jesty, a Gloucestershire farmer, with being the first to perform vaccination, preceding Edward Jenner by no fewer than twenty-two years. He quoted to show that the mosquito theory as to the cause of malaria was known many years, that many savage tribes used to anoint their bodies in order to protect themselves from the bite of the mosquito, and that even a report bearing on the relation of the mosquito to malarial fever was once sent to the naval department and no attention paid to it.

The relation of rats to bubonic plague is also a truth which was known from time immemorial. It was demonstrated that many times the observations of laymen precede medical discoveries and that on the observations of Zadik's, as well as the interpretation of characters like the mythical Sherlock Holmes will depend future discoveries as much as to the laboratory workers.

Care of Epileptics.

DR. WILLIAM P. SPRATLING, superintendent of Craig Epileptic Colony, Sonyea, N. Y., read a paper, illustrated by 56 stereopticon views, on how epileptics are cared for and treated at that institution. He spoke of two classes of colonies, (1) for selected cases, (2) for all epileptics save the insane. He prophesied that in the future every city of over 500,000 inhabitants will have its own colony for epileptics. In building an epileptic colony attention must be given to an epileptic's peculiarities, the difference of age, sex, social status, mental condition, etc.

Craig Colony for Epileptics represents the mixed type of colony, for its inhabitants comprise every variety of epileptic, from the epileptic of normal mind (5 per cent.) to the insane and idiotic. The epileptic must be suitably employed; 50 per cent. of them at the colony work: 25 per cent. do light house work.

It is necessary to educate the epileptic, and the earlier, therefore, an epileptic comes to the colony the better will the results be. There is a tendency for each recurring epileptic paroxysm to disorganize the brain and the memory is necessarily affected. Repetition is therefore a necessity in their education. The muscular education gives better results than education of the mind, so that manual training is employed to advantage at the colony.

The treatment is divided into (1) medicinal, (2) surgical, (3) dietetic and (4) moral. Nothing can be said of the medicinal treatment in a paper such as this. Every rational treatment is employed. Salt starvation (hypochlorization) is used with good results. Surgical operations are performed by the house staff at the colony. Brain surgery has not proven very successful. The ancestral history is carefully worked out in every case to ascertain an epileptic taint. Such cases are not operated on. Only when a focal lesion is present can an operation give good results.

Abdominal surgery is also performed with satisfactory results. Lately the eyes of many patients were examined for errors of refraction. Many patients refracted are much the better for the treatment. The dietetic treatment is carefully attended to. The epileptic must be recognized as a degenerate and discipline gently applied.

Dr. Spratling summarized his paper briefly as follows: 1. The colony treatment cures better than other forms of treatment. 2. It reduces the attacks. 3. It provides special education to make patients more helpful. 4. Promotes individual happiness. 5. Encourages research and provides for best treatment. 6. The segregation of such people has an economic value to the state, for it prevents handing down a defective progeny.

The paper was discussed by Drs. James W. Putnam, William O. Krauss and Allen O. Jones.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns without allusion to inquirer.]

Hemoptysis.

Hare, in *Med. News*, states that there is no doubt that of all the internal remedies for hemorrhage of the lungs, aconite is the best. If the patient is too much exsanguinated to use sedatives, place the head lower than the feet and apply an Esmarch bandage to the limbs. If the hemorrhage is just beginning, the following may be inhaled from an atomizer throwing a fine spray:

R. Liq. ferri subsulph. m. xx-xxx 130-2
Aque destil.̄iv 120

M. Sig.: To be sprayed and inhaled every few minutes; or:

R. Acidi tannici gr. xx 130
Glycerinīiii 8
Aq. destil. q. s. ad.....̄iii 90

M. Sig.: In atomizer; or:

R. Aluminis gr. vi 40
Aq. destil.̄iii 90

M. Sig.: In the atomizer. He states that if Monsel's solution does not stop the hemorrhage tannic acid will probably fail; but, more important, the two should not be used together, as they are incompatible, forming the tannate of iron.

Medical Treatment of Tuberculosis.

Dr. J. Shoup, in *Amer. Med.*, states, in the treatment of tuberculosis, that the following drugs should be selected:

1. Those drugs which promote metamorphosis, which results in healthy tissue construction. In this class he mentions iron, arsenic, strychnin, phosphorus and vegetable tonics.

2. Those drugs which are bactericidal in their action, and being eliminated by the lungs tend to attack the disease *in situ*. Creosote is taken as the type of this class given in large doses. However, he states that creosote given by inunction, inhalation, or enema has its drawbacks. When it is given by inunction

the odor becomes too disagreeable, and the irritation becomes unendurable; by inhalation it is too irritating and not so efficacious as the essential oils; by enema it soon becomes obnoxious to the patient, and by intratracheal injection it succeeds in checking the cough and partially deodorizing the sputum. He prefers guaiacol on account of its being less disagreeable to the patient. It is not so liable to cause gastric distress, and is quickly assimilated. Guaiacol carbonate is usually given, but guaiacol valerianate is an admirable remedy in nervous cases and is well borne. He has discontinued the use of ichtliol because of the disagreeable eructations and nausea of the patient. Its action is dependent on the sulphur it contains, and the author sees no reason why sulphur can not be given as such.

3. Those drugs which stimulate phagocytosis. This includes the serums and other medicinal agents as cinnamic acid, which may be given in combination with arsenic, as follows:

R. Acidi arsenosi gr. x 65
Potass. carb. gr. xvii 12
Acidi cannamiçīss 2
Boiled with aq. destil. q. s. ad.....̄i 30

Add:

Ext. opii (aqueous) gr. xxx 2
Vini gallicīss 15
Aq. destil.̄iii 60

M. Sig.: Begin with three drops after lunch and after dinner and increase to twenty drops.

Tubercular Laryngitis.

G. L. Richards, in *Internat. Jour. of Surgery*, recommends the following formulæ in the form of insufflations in the treatment of tubercular laryngitis:

R. Morphina sulph. gr. v 30
Iodoformīiii 12

M. Sig.: A small amount to be insufflated by means of a powder blower; or:

R. Morphin. sulph. gr. 1/30 1002
Hydrarg. chloridi mit. gr. xx 130
Sacch. lactis gr. xl 265
Bismuthi subnit. gr. xl 265

M. Sig.: To be used as an insufflation. He states that intratracheal injection of guaiacol, menthol and orthoform, as in the following formulæ, frequently afford relief and possibly retard the progress of the disease:

R. Menthol. gr. xxx-̄iiss 210
Ol. amygd. dulcis.̄i 30
Vitelli ovīvi 24
Orthoformīiii 12
Aque destil.̄iii 90

M. Ft. emulsio. Sig.: To be used on a swab or in an intratracheal syringe, preferably the latter; or:

R. Camphoræ
Menthol.
Guaiacol, aa gr. xlvi 320
Olei olivæ q. s. ad.....̄ii 60

M. Sig.: To be introduced with the intratracheal syringe during inspiration.

Treatment of Epididymitis.

Bandoy, according to an abstract in *N. Y. Med. Jour.*, recommends for the local treatment of epididymitis continued moist medication with a sterilized solution of sodium chlorate. The use of ice has the objection of causing induration that may lead to obliteration of the vas deferens. When the acute initial pain has been subdued, sitz baths repeated four or five times daily, lasting from fifteen to twenty minutes at least, and finally for forty-five minutes, should be employed, continuing also the use of moist compresses. As soon as the sensitiveness has been diminished so as to allow of light massage, frictions with resolvent ointments can be made, twice daily after the bath for fifteen minutes:

R. Tinct. iodi gtt. xv 1
Pot. iodidi gr. xxx 2
Petrolatīv 20

M. Sig.: Apply locally twice a day.

Internally one gram (gr. xv) of potassium iodid should be given daily. By following this plan accurately one obtains

more surely than by any other method, a satisfactory retrogression of the inflammatory infiltration and complete restoration to the normal condition.

Bronchitis.

According to Musser in *Nothnagel's Encyc. of Med.*, bronchitis frequently begins with an acute cold in the head, coryza, and perhaps pharyngitis, with symptoms of general malaise, fever and muscular pain. There are also cases with laryngitis rapidly extending to the bronchi and others beginning primarily in the bronchi. In the first class, if there is much headache and frontal pain, he recommends the following:

R. Camphoræ	gr. i	106
Ext. belladonnæ	gr. i-ss	106-09
Quininæ sulph.	gr. i-ii	106-12
Morph. sulph.	gr. 1/40	1005

M. Fiat. capsula No. i. Sig.: One such capsule every half hour for four doses. Then one every three hours.

If the patient should suffer from myalgia, chest oppression, tight cough, one of the following combinations is recommended:

R. Quininæ sulph.	gr. i-ii	106-12
Pulv. opii et ipecac.	gr. i	106
Acetanilidi	gr. i	106

M. Ft. capsula No. i. Sig.: Take two such capsules at once, two in two hours, then one every three hours; or:

R. Mist. potassii cit.	℥iv	120
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Sig.: One tablespoonful every two hours; or:

R. Potassii iodidi	gr. xlv	3
Vini ipecacuanhæ	℥iii	8
Mist. glycyrrhizæ co. q. s. ad.	℥iii	90

M. Sig.: One teaspoonful every two or three hours.

If the cough is harassing, 1/30 to 1/12 (.002-.005) grain of heroin may be added to the dose in any combination.

The following serves well to relieve the cough and oppression:

R. Syr. ipecac.		
Syr. sanguinarie		
Syr. scillæ, aa.	℥iii	8
Syr. pruni virg. q. s. ad.	℥iii	60

M. Sig.: One half to one teaspoonful every two or three hours.

In the later stages ammonium chlorid, terpin hydrate, terebene and tar preparations are recommended:

R. Ammon. chloridi	℥i	4
Terpin. hydratis	℥i	4
Pulv. opii et ipecac.	gr. xxiv	165

M. Ft. cap. No. xxiv. Sig.: One or two, according to the age, every two or three hours.

In the above, if the cough is easy and the expectoration free the opiate may be withheld.

The following is of service to meet the general indications in bronchitis:

R. Ammon. chloridi	℥i	4
Vini picis liq.	℥i-ss	6
Mist. glycyrrhizæ co.	℥i-ss	45

M. Sig.: Two teaspoonfuls every two or three hours.

The author very justly adds that stimulants, as strychnin, keep up blood pressure and arterial congestion and hence tend to aggravate the bronchitis present. However, should venous hyperemia exist their use is justifiable.

A New Method of Extracting Foreign Bodies from the Ear.

There is no more delicate and even difficult task, so states the *Med. Press*, than the extraction of a foreign body from the external auditory canal. Irrigation often fails to bring it away, and in certain cases adds to the difficulty by causing the object, a pea for instance, to swell and become more firmly impacted. The employment of instruments is very painful and requires considerable dexterity, besides supposing an armamentarium specially designed for the purpose, which few general practitioners possess. The recommendation is made of a piece of soft rubber tube, the length of a cigarette and of the proper size, to be introduced into the ear. The end of the tube is dipped in paraffin and pushed into the canal until it comes in contact with the foreign body, whereon the operator, applying his mouth to the free end, aspirates forcibly, at the

same time throwing back his head. Except in cases of angular bodies of irregular contour this method is usually attended by success, the body coming away with the tube.

Medicolegal.

Three Thousand Dollars for Fracture of Femur.—The Supreme Court of Iowa holds, in the personal injury case of Beringer vs. Dubuque Street Railway Company, that, in view of the character of the injury—the head or neck of the femur being fractured—and the evident pain and suffering caused thereby, a verdict for \$3000 was not excessive.

Physician Must Show Prior Appropriation for Services.—The Nebraska case of De Wolf vs. Village of Bennett was brought by a physician to recover for services rendered in taking charge of a smallpox patient. He alleged in his petition that he was duly authorized by the State Board of Health to practice medicine and surgery in the state and had filed his certificate; that the village was a duly organized municipal corporation; that it was authorized by statute to provide pest-houses, to prevent the introduction and spread of contagious diseases, and to make contracts and incur expenses for that purpose; that on or about a given date a certain party was afflicted with smallpox, and the other residents of the village were in danger of contracting the disease; that the village, acting by and through its trustees, established a pesthouse, and requested him to remove the party thereto and to take charge of and treat the case, and prevent the spread of the disease, for all of which, through its trustees, it agreed to pay him, in pursuance of which he rendered the services sued for, which were accepted and received by the village, and by the trustees without objection; that he made the fair and reasonable charge of \$104 therefor, presenting his account to the village, and filing same with its board of trustees, demanding payment, which was refused. To this petition a general demurrer was interposed, the village contending that it was necessary for the physician to plead the contract, and that the proper preliminary proceedings had been taken by the village board, showing that an appropriation had been made, because, without such appropriation, the village had no authority to make contracts or create liabilities like that involved in this case. The demurrer was sustained, and the Supreme Court of Nebraska holds that this was proper, the claim on which the case rested being one for which a prior appropriation was essential.

Libel of Physician by Calling Him a "Quack."—A newspaper said that a certain candidate for office might as well give up the fight. It had supposed that he had at least a fighting chance, if not an absolutely sure thing. "But," it continued, "here comes 'Doctor' Ralph Elmergreen, the spick and span practitioner, who says that it's all off, and that all the powers of hades can't prevent Sam's re-election. The burden of the doctor's refrain is vindication—for Sammy. It appears that some untruthful Democrat misquoted Sam's Hartford speech, particularly that portion of it concerning the regulation of trusts. We do not know what Barney said about trusts; neither do we care. Sufficient be it that we do not look to a quack to set us right in the matter. . . ." An action for libel followed. Evidence was produced on behalf of the party sued, who was the editor, publisher and proprietor of the paper, to the effect that he knew that the party suing was a physician and surgeon, but that he had no intention of injuring him in his professional capacity. There was also evidence introduced on behalf of the publisher in regard to the various dictionary definitions of the word "quack." The result was a verdict and judgment for the publisher. But this last is reversed by the Supreme Court of Wisconsin, and a new trial ordered. It says, *Elmergreen vs. Horn*, that it was correctly ruled that to speak of a physician in his professional capacity as a "quack" is to call him a mere pretender, a person boasting of attainments he does not possess, and is libelous as a matter of law. It was further correctly ruled that in a case of this kind if there are conflicting reasonable inferences as to whether the alleged libelous language should be understood in

a libelous sense, the right of the matter must be determined by a jury. The trial judge concluded that there was such a conflict in this case, and refused to give instructions to the jury in effect, taking away from it the question of whether the article complained of was libelous *per se*, or in and of itself; and that is what the Supreme Court holds was reversible error. Candor, it declares, compels it to say that it can not discover any doubt, approaching the boundaries of reason, as to whether the term "quack" was used with reference to the party suing in his capacity as a physician and surgeon. Taking the language all together, with the same certainty as it referred to him as doctor, it referred to him as a quack doctor, as a mere pretender in his profession, a person not possessing the skill of a reputable practitioner of medicine, though assuming to have such skill. Note, it says, for one thing, the significance of the inclosure of the word "Doctor" in quotation marks, indicating that the writer wished to dignify him by the title of doctor in no other sense than that he was so called or held himself out to the world as such. And finally the Supreme Court says that it would be a waste of time to multiply words in demonstrating that the only meaning suggested by reading the article in question was that the party suing was referred to therein as a quack doctor. If the learned circuit judge had not considered the matter doubtful, the court would feel that one could not seriously present it for consideration from the standpoint of the party sued. That the judge erred in submitting the primary question of the latter's liability to the jury, the court regards so clear that it is not justified in saying more.

Venereal Disease as Evidence of Rape.—The Supreme Court of Iowa says, in the case of *State vs. Height*, that a prosecution for rape on a child 10 years of age, the evidence tended to show that the latter did not make complaint until about 11 days after the alleged outrage, and then, on examination by physicians, was found to have venereal disease. To show that at the time of the alleged intercourse the accused was afflicted with the same disease, which he might have communicated to the child, there were called as witnesses certain physicians who had examined the private parts of the accused while he was confined in jail under arrest for the crime charged, and who found that he then had, or had recently had, the disease in question. For the accused it was contended that this physical examination of him was made against his protest, and, further, that the testimony of these physicians was with reference to a privileged communication. But the court suggests that it was enough to say in answer to this last contention that the physicians were not called by the accused, nor did he, even if he submitted to the examination, do so with the idea that the physicians making it were acting as his physicians. The objection to the testimony that it disclosed a privileged communication was therefore not well taken. Again, it was urged that the testimony related to a confession by the accused which was not voluntary, and that the evidence should have been excluded for that reason. The court replies that the accused made no confession of guilt, nor admission that he was afflicted with the disease for which he was examined, and that it has been well settled by decisions without conflict, that, even though a confession be involuntarily made, inculcating facts discovered by means thereof may be established against the accused. Consequently, there was nothing in the rule excluding involuntary confessions to prevent the physicians who made the examination of the person of the accused from testifying to his condition with reference to having venereal disease. However, inasmuch as the examination by physicians was made under the direction of the prosecuting attorney, and was at first resisted by the accused, who finally consented thereto, if at all, only after he had been told by one of the officers who made the arrest, and who was present, acting under the direction of the county attorney, and in his presence, that the state had the right to require such an examination to be made, and that the accused must submit to it, the court holds that this was amply sufficient to indicate legal duress, and that evidence secured by such duress, and which could not have been secured otherwise, was inadmissible over the objection of the accused. In other words, it holds that the officers acted unlawfully in com-

evidence with reference to information secured thereby should have been excluded on his objection. It takes this position, notwithstanding there is no such provision in the Iowa constitution as in some others to the effect that the accused in a criminal prosecution shall not be compelled to be a witness against himself. The court further holds that if on a retrial there should be competent evidence that the accused had venereal disease at the time of the connection with the prosecutrix, evidence—if any were brought forward—of her having had sexual connection with others near the same time should be admitted to show that the disease might have been contracted by her from other sources.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine (Philadelphia), November 15.

- 1 *An Infectious Form of an Eczematoid Dermatitis. Martin F. Engman.
- 2 *The Surgical Anatomy of the Middle Ear: A Factor in Favor of Early Interference in Suppurative Affections (with Demonstrations). Emil Amberg.
- 3 Ankylostomiasis, the Most Common of the Serious Diseases of the Southern Part of the United States. H. F. Harris.
- 4 *The Accidents of Anesthesia: Their Prevention and Treatment. Daniel N. Elsendorath.
- 5 *The Relation between Pernicious Anemia and Achylia Gastrica. Harry Adler.
- 6 *Practical Deductions from Experiences in a Hospital for Pulmonary Tuberculosis. B. F. Lyle.
- 7 Altitude in Fact and Fancy. Henry Sewall.
- 8 Professor John Berg's Surgical Clinic. Nicholas Senn.

Medical News (N. Y.), November 15.

- 9 *Climatology of California. Alexander McAdie.
- 10 *The Climate of the Eastern Foothills of Southern California. C. A. Sanborn.
- 11 *The Climate of Maine. Guy Hinsdale.
- 12 *Lacerations of the Uterine Cervix and Their Sequelæ. Charles H. Bushong.
- 13 The Influence and Value of Uric Acid in the Blood as a Cause of Stomach and Intestinal Disease. George W. Miles.
- 14 Uric Acid in the Blood as a Cause of Stomach and Intestinal Disease. F. Ward.
- 15 Gunshot Wounds of the Chest and Abdomen from a Military Standpoint. Louis A. LaGarde.
- 16 Medical Treatment of Cholelithiasis. R. Alexander Tate.

Medical Record (N. Y.), November 15.

- 17 *The Primary New Growths of the Pleura. Francis Delafield.
- 18 *The Present Status of Radiotherapy in Cutaneous Diseases and Cancer. Charles W. Allen.
- 19 Biogenesis and Heredity. Raymond Wallace.
- 20 *The Criminal Responsibility of the Epileptic. John Punton.

New York Medical Journal, November 15.

- 21 *The President's Address Delivered at the Fifteenth Annual Meeting of the American Association of Obstetricians and Gynecologists. Edwin Ricketts.
- 22 *Pathology and Treatment of Epilepsy. (Concluded) William H. Thomson.
- 23 *A Case of Ringworm of the Face and Two of the Scalp Contracted from a Microsporon of the Cat; with Some Observations on the Identification of the Source of Infection in Ringworm Cases by Means of Cultures. A. D. Mewborn.
- 24 Depressed Fracture of the Malar Bone, with Report of Three Cases. Stewart LeRoy McCurdy.
- 25 *Experimental Investigations with Roentgen Rays upon Living Tissue. J. Rudis-Jelinsky.
- 26 Studies on Heredity. Raymond Wallace.

Philadelphia Medical Journal, November 15.

- 27 *Some Points in the Treatment of Post-operative Abdominal Cases. John B. Deaver and George P. Müller.
- 28 Aneurism of the Ascending Portion of the Arch of the Aorta, Manifested Early by Intractable Intercostal Neuralgia; Also Report of a Case of Aneurism of the Abdominal Aorta; Rupture and Death. William C. Krauss.
- 29 *The Diet in Typhoid Fever. William E. Robertson.
- 30 *Foreign Bodies in the Vermiform Appendix. James Bell.
- 31 The Microscopic and Chemical Factors in Determining the Functional Condition of the Kidney. Louis Heltzmann.
- 32 A Case of Severe Dermatitis Following the Use of Mercurial Ointment. Lawrence E. Holmes.

Boston Medical and Surgical Journal, November 13.

- 33 Barber-Surgeons. Frederic W. Taylor.
- 34 *The Clinical Study of 485 Cases of Nail Disease. Charles J. White.
- 35 A Probable Myxofibroma of the Nose. Seabury W. Allen.
- 36 Gunshot Fatality: Source of Shooting Proved by an Examination of Ammunition. O. J. Brown.
- 37 A Fatal Case of Mandrake Poisoning. A. W. Buck.

Cincinnati Lancet-Clinic, November 15.

- 38 A Correct Report of the Case of Henry Krause, the Matricide. Charles J. Aldrich.
- 39 Two Cases of Eye-strain—Asthenopia. Mark D. Sterenson.

Ned Anatomist, and the Village Church. J.

- 41 Surgery of Prostate Pancreas and Diaphragm (Continued)
B Merrill Ricketts

St. Louis Medical Review, November 8

- 42 The Importance of Consideration of Habit in the Treatment of Sleeplessness Wm Wormley

Medical Fortnightly (St. Louis), November 10.

- 43 The Pathological Status of Retroverted Uterus W T Tichenor
44 Digestive Disorders in Consumption with Mixed Infections Paul Paquin
45 The Protection Against Smallpox by Successful Vaccination Marcus H Thomas

Medical Age (Detroit, Mich.), November

- 46 X Ray Apparatus and X Ray Methods and the Lines Along Which Progress Has Been Made Eugene R Corson
47 The X Ray Treatment of Cancers John W Frankl
48 Mercurof as a Choleagogue Laxative H E Sauer

Virginia Medical Semi-Monthly (Richmond), November 7

- 49 Treatment of Typhoid Fever with Castor Oil C C Bass
50 Gastricotomy with Report of Two Cases Albert Vanderveer
51 The Subcutaneous Injection of Paridin for the Correction of Deformities with Report of Cases Julius F Lanch
52 Climatic and Electric Peculiarities of Colorado Favoring Recovery in Pulmonary and Other Diseases I E MacNeill
53 Necrosis of the Tibia as a Result of Typhoid Fever John W Shaw
54 Diagnostic Points of Difference between Spinitis and Seminal Pollutions F R Sturgis
55 The Proper Use of Vaginal Pessaries J Wesley Boyce

St Paul Medical Journal, November

- 56 A Case of Cerebellar Tumor with Escape of Cerebrospinal Fluid Through the Nose Arnold Schweizer
57 A Brief Resume of Brain Tumors with Report of Two Cases George E Sherwood
58 Chlorosis George D Head
59 Pneumonia T L Hatch
60 The Study of Internal Medicine John W Bell
61 Suppuration of the Pterygoid Process R C Dugan
62 Report of Two Cases of Hemorrhagic Scarlet Fever and a Probable Third Walter R Ramsey

The Quarterly Journal of Inebriety (Hartford, Conn.), October

- 63 Dangers from the Indiscriminate Use of Morphine T D Crothers
64 The Basis for the Use of Alcohol in Therapeutics A R Cushing
65 The Toxicity of Methyl Alcohol Reid Hunt
66 The Law and the Inebriate, with Remarks on the Treatment of Inebriety Joseph Collins
67 How Can We Best Combat the Alcohol Evil? John Madden
68 The Effects of Nicotine Jay W Seaver
69 Alcoholic Psychoses in Women H E Sanderson
70 Alcoholic Amaurosis Frank Van Fleet

Denver Medical Times, November

- 71 A Brief Statistical Report of Abdominal Cases Operated on Since Jan 1, 1898 I B Perkins
72 Septicemia and the Curette H Plympton
73 Surgical Remarks Regarding Appendicitis—Report of Cases of vaginal Ovariectomy—Osteomyelitis of the Tibia—Complete Rectal Fistula and Appendicitis Harlan Trask
74 The Utility of the Genital Vascular Circle or Circle of Author Byron Robinson

American Gynecology (N. Y.), October

- 75 Preliminary Report of Some Observations on the Blood of Pregnancy and the Puerperium George R Pray
76 Ectopic Gestation Considered Clinically F A L Lockhart
77 Intra-abdominal Shortening of the Round Ligaments Per Vaginum for the Cure of Retrodisplacements of the Uterus J Riddle Goffe
78 Removal of the Urinary Bladder for Cancer, with Report of a Case A Laphon Smith
79 Are Ventrofixation and Ventrosuspension of the Uterus Justifiable Operations? Henry J Kreutzmann

Indiana Medical Journal (Indianapolis), November

- 80 Résumé with Illustrative Cases of Trained Nurses at Evansville Hos
pital Edwin Walker
81 America's Contributions to Surgery Dr John Stough Bobbs, the Father of Cholecystotomy Martin B Tinker

Archives of Otolaryngology (New Rochelle, N. Y.), October

- 84 Purulent Phlebitis of the Sigmoid Sinus without Thrombosis, Death from Meningitis, Autopsy Arnold Knapp
85 A Case of Chronic Purulent Otitis; Extradural Abscess, Meningitis Death Autopsy Arnold Knapp
86 Colloidum After Nose Operations Kaspar Fischel
87 In regard to a Case of Primary Acute Purulent Inflammation of the Mastoid Cells, Involving Neither the Middle Ear Nor the Mastoid Antrum; Reported by John Dunn, M D E F. Snyder
88 Histological Study of Tumors of the External Ear Franz Alexander
89 On the Local Action of Tri Chlor Acetic Acid Hugo Schwabe

Annals of Gynecology and Pediatrics (Boston), November

- 90 Congenital Dislocation of the Hip the Causes of Relapse E H Bradford
91 A Report of One Hundred Obstetrical Cases Edwin Rosenthal
92 Persistence of the Thyroglossal Duct, A Report of Two Cases John H Jopson
93 A Case of Vaccination and Appendicitis Francis D Donoghue

New York State Journal of Medicine (N. Y.), November

- 94 President's Address, Reflections on Some of the Purposes and Work of the New York State Medical Association Alvin A Hubbell
95 The Radical Cure of Cancer of the Stomach William J Mayo
96 Report of an Interesting Case of Typhoid Infection A W. Preston
97 Pseudo Rheumatism James J Walsh
98 Septicemia and the Curette H Plympton

Kansas City Medical Index-Lancet, November.

- 99 The Future Physician an Optimist (Continued) William I Batclav
100 Some Points on Modern Hygiene C B Hardin
101 Reminiscences of a Recent Trip Abroad Including Visits to the London Paris Berlin, etc., Hospitals, Clinics, Medical Museums and Libraries as Well as to the British Medical Association John Panton
102 Coughs St Elmo Sanders

The Post-Graduate (N. Y.), November

- 103 The Heart in Pneumonia C F Walnwright
104 Nekrologos on Virchow A Rose
105 Examination of the Secretions of the Mouth and of the Gastric and Intestinal Contents (Continued) Hermann Lehman
106 The Germ Theory of Disease Again Joseph Clements
107 Diseases of the Thyroid Gland E Graetzer

Medical Summary (Philadelphia), November.

- 108 Septicemia and the Curette H Plympton
109 Report of a Case of Septicemia—As I Felt It Myself J C Newman
110 Consumption—Preventive W C Derby
111 New Pharmaceutical Products and Their Relation to Practical Medicine J E Du Vall
112 Pericious Vomiting of Pregnancy (Hyperemesis) J A Smith
113 Agurin, a New and Efficient Diuretic William R D Blackwood
114 Sore Eyes of the Newborn Ben H Brodnax

Iowa Medical Journal (Des Moines), October 15

- 115 The Diagnosis of Pulmonary Tuberculosis F W Milroy
116 Conditions Favoring Tubercular Infection R E Conniff
117 Some Experiments Relative to the Inhalation of Germs, with Special Reference to the Tubercle Bacillus G A Johnson
118 Three Cases of Rupture of the Uterus I Hornbrook
119 Purpura Hemorrhagica (Morbus Maculosus, Werlhof) W F Beiner
119½ Professor Rudolph Virchow A R Ames

Annals of Surgery (Philadelphia), November.

- 120 The Technic of Prostatectomy John P Bryson
121 The Prepectal Curvilinear Incision for Prostatic Abscess, with a Report of Three Cases Joseph Ransohoff
122 A Tomy of the Middle Cranial Operations for the Removal of and Bartlett
123 The Gastroenterostomy, with a Designed to Prevent Its
124 So called Hypertrophic Tuberculosis of the Intestine H F Harris
125 Perforation of the Bowel in Typhoid Fever G D Armstrong
126 A New Method of Treatment for Fracture of the Neck of the Femur, Together with Remarks on Coxa Vara Royal Whitman
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American Journal of Obstetrics (N. Y.), November.

- 129 The President's Address, American Association of Obstetricians and Gynecologists Edwin Ricketts
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131 Extirpation of the Gall Bladder Through the Lumbar Incision, with Report of a Case W P Manton
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137 The Vaginal Route for Operations on the Uterus and Appendages, with Cases J H Bianham
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141 Some Unusual Cases of Appendicitis and the Lessons They Teach Miles F Porter
142 Four Cases Illustrating the Difficulties of Diagnosing Appendicitis William W Sevrin
143 Intrauterine Fibroids Complicating Pregnancy, and Retained Placenta Associated with Intrauterine Fibroids Complicating Pregnancy Cases and Treatment Magnus A Tate
144 Decidua Maligna, with Report of a Case Lewis S McMurtry
145 Report of a Number of Cases of Operation for Peritoneal Tuberculosis Rufus B Hall.

American Medical Compend (Toledo), November.

- 146 Insomnia. Hiram A. Wright.
 147 *Septicemia and the Curette. H. Plympton.
 148 Microbes and Disease. A. T. Cuzner.
 149 Potassium as Compared with Sodium and Strontium Salts. Charles Louy.
 150 The Use of Iron in Chlorosis and Anemia. H. Suchannek.
 151 The Efficacy of Antiseptics in the Treatment of Certain Conditions, with Special Reference to the Merit of Glycothymoline. C. H. Powell.

Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), November.

- 152 A Critical Review of L. Philippon's Proposed Reform of Dermatology. Herman G. Klotz.
 153 *The Clinical Aspect and Treatment of Some Affections of the Finger Nails. Fred J. Levisseur.
 154 *A Further Report on Nevo-Carcinoma. A. Ravogli.

Pacific Medical Journal, November.

- 155 Prostatectomy. Winslow Anderson.
 156 An Improved Method Over that of the "Morgan" for the Rapid Cure of Varicocele. Frank A. Brewer.
 157 Silver Vitelline. R. Cadwallader.
 158 *Septicemia and the Curette. H. Plympton.
 159 Is the Mosquito the Sole Agent in Transmitting Malaria? George L. Bluhm.

The Physician and Surgeon (Detroit and Ann Arbor, Mich.), July.

- 160 *Both Sides of the Personal Injury Question. Frank T. Lodge.
 161 *Postmortem from the Medicolegal Standpoint. William P. Lane.
 162 Transient Astigmatism. Ovidus A. Griffin.

Medical Mirror (St. Louis, Mo.), October.

- 163 *The Irrational Starvation Treatment of Appendicitis. John B. Deaver.
 164 Cases in Hematherapy from Sound View Hospital. T. J. Biggs.
 165 The Eliminative and Local Treatment of Gout, Rheumatism and Neuralgias. I. N. Love.
 166 Rheumatism. A. M. Carpenter.

St. Louis Courier of Medicine, November.

- 167 *The X-Ray as a Therapeutic Agent. A. V. L. Brokaw.
 168 *Gynecologic Diseases Without Local Symptoms. George Gellhorn.
 169 The Cecum: In Relation to the Psoas Muscle in 310 Adult Male and 125 Adult Female Autopsies. (Continued.) Byron Robinson.
 170 Two Cases of Epithelioma Treated by X-Rays. H. N. Chapman.

Georgia Journal of Medicine and Surgery (Savannah), July.

- 171 The Early Diagnosis of Pulmonary Tuberculosis by Roentgen X-Rays Method. Mirhan K. Kassabian.
 172 Comments on Yellow Fever and Mosquitoes. R. D. Murray.
 173 A Contribution to the Therapeutics of Anemic Conditions. Hermann Mettall.
 174 Malaria; Its Prevention and Cure. H. E. McKay.

Medical Bulletin (Philadelphia), November.

- 175 The Value of Discipline in Medicine. F. Savary Pearce.
 176 Keloid—Seborrhea—Acne—Paresthesia. John V. Shoemaker.
 177 Typhoid Fever: A Few Hints as to the Treatment of Some of Its Symptoms. George W. Pfromm.

Kingston Medical Quarterly, October.

- 178 Immunity. W. T. Connell.
 179 Passage of Large Gallstone Per Rectum. Margaret Symington.
 180 The Detection and Estimation of Sugar in the Urine by the Elliott Method. Walter S. Jaquith.
 181 The Diagnosis of Acute Suppurations in the Accessory Sinuses of the Nose. J. C. Connell.
 182 *Septicemia and the Curette. H. Plympton.
 183 Surgical Notes (Vesical Calculus, etc.). D. E. Mundell.

Medical Times (N. Y.), November.

- 184 The Outlook of Medicine Is Toward Prevention. Richard C. Bankston.
 185 Quack Medicine. A. L. Benedict.
 186 Vomiting in Pregnancy. O. M. Bourland.

Providence Medical Journal, November.

- 187 Heredity and Its Lessons. George F. Keene.
 188 *The Etiology of Endocarditis. W. Louis Chapman.
 189 *Post-Operative Mortality, with Especial Reference to Death from Anesthetics. Albert H. Miller.

1. Eczematoid Dermatitis.—Engman enumerates the basic and principal results of his investigations in the following:

1. The contents of the initial vesicles, serous and seropurulent discharge, under surface of crusts and scrapings from freshly denuded surface of eczematoid skin, produce, when inoculated into artificial culture media, pure cultures of the staphylococcus, yellow or white or both. These cocci sometimes vary slightly in the peculiarity of their growth, but are certainly the staphylococcus of the ordinary types.

2. When the apparently healthy skin of a person suffering from an eczematoid dermatitis is slightly irritated, after being rendered sterile by the usual means, and then inoculated with the discharge from the eczematoid surface, there appears thereon a condition similar in its flora and symptoms to the one from which the discharge was taken. Inoculation experiments from individual to individual have not been encouraging, due most probably to the patient's unwillingness to properly submit or the reaction of the foreign soil.

3. Inoculations upon individuals from artificial cultures were also not encouraging. The organism must undergo some change in its chemotactic character in artificial media, as inoculations from it produce impetigo or purely impetiginous lesions which quickly heal; or if the lesion takes on an eczematoid character it heals too rapidly to be of much experimental value.

4. The suppurative conditions with which eczematoid dermatitis is often associated always contain staphylococci.

5. The association with suppurative conditions; history of apparent infection and infection; exciting factor of traumatism and infection; findings enumerated, all indicate and confirm phylogenetic origin of this dermatitis.

2. Ear Disease.—Amberg describes the anatomy of the ear, with illustrations, and repeats the classic indications of Schultze in regard to the early mastoid operations. He remarks that when interference is not directly based on the vital indications, the timely paracentesis may frequently make a mastoid operation unnecessary, and that a timely mastoid operation may save the patient from undergoing a radical operation or operations for complications, which are not always successful.

4. Anesthesia.—The conclusions of Eisendrath's article are:

1. Chloroform has a narrower zone of safety than ether. Its toxic effects are, as a rule, manifest at the time of administration. Ether is the cause of death in many cases through renal or pulmonary complications from hours to days after the anesthesia. The late deaths due to chloroform are so rare as to render this factor practically of no importance. Chloroform is a more dangerous anesthetic than ether and must be watched far more carefully.

2. Chloroform kills more frequently through primary cardiac than respiratory syncope, and the anesthetizer must watch constantly the decrease in volume and rapidity of the pulse, indicating the fall of blood-pressure, and a slowing of the more shallow respiration. Chloroform syncope can be avoided by keeping the head low, if possible turned to one side, keeping the jaw forward, watching the pulse, respiration and pupil, keeping the patient's mind quiet and keeping the chloroform well diluted with air.

3. Ether rarely causes death through its immediate, but more frequently through its after-effects, such as pneumonia and uremia. These complications may be avoided by keeping the head lower than the level of the body, turned to one side, and not giving the ether in too concentrated a form; also by not keeping the patient on his back too long, and by relieving postoperative tympanites as soon as possible. The contraindications to the use of chloroform are myocarditis, pericardial adhesions and noncompensated valvular disease. In all other forms of heart disease it may be given. It should not be given when the blood pressure is low or in status thymicus, or when a prolonged anesthesia is necessary.

4. The pulmonary complications are relatively more frequent with local anesthesia than if a general anesthetic is given. They may be due to aspiration of mucus or food, or due to hypostasis and to embolism. The latter is far more frequent than is ordinarily thought. Avoid these by exposing patients as little as possible. Use heated operating tables, avoiding recumbent position and tympany.

5. Avoid renal complications by careful examination of the urine before anesthesia.

6. Begin process of resuscitation immediately and systematically: Artificial respiration, the method of König-Maas, or massage of the heart, rhythmic traction of the tongue, method of Prus, or direct exposure of the heart and intravenous salt transfusion. I prefer to begin with massage of the heart and rhythmic traction of the tongue (16 to 18 times a minute).

5. Pernicious Anemia.—According to Adler, who reports and remarks on cases of pernicious anemia, we have to deal in this condition with a toxic process, the stress of the action of the poison or poisons being exerted on the blood and cord. The resulting hemolysis is confined chiefly to the portal area. The gastric atrophy is regarded by almost all authorities as a primary condition, and presents conditions favorable for elaboration and absorption of the toxins, acting in other ways as a predisposing cause. We are to look on the anemia of pernicious anemia as only a symptom, but from the marked alteration which the blood undergoes, and the vital effects thereof, it is the most important symptom of the disease to which our therapy for the present must be directed.

6. Tuberculosis.—Lyle reviews his experience in a municipal hospital and notes particularly the necessity of following up the treatment, and the almost constant association of pleurisy of the dry type, the predominance of intemperance and syphilis in the histories, the importance of family history and of contagion, and the unreliability of statements as to the duration of the disease. About 90 per cent. of the cases were of the fibrocaceous variety; 9 per cent. of the fibroid form of the disease, while acute miliary tuberculosis of the lungs and lobar caseous pneumonia were rare. The majority of persons under twenty have a more or less extensive involvement of the lymphatic glands, and general tuberculosis is more likely to occur in the young. Next to the lymphatics we find the frequency of tuberculous complications of other organs in the

following order: Larynx, intestines, pharynx, joints, kidneys, peritoneum, bladder, meninges, testicles. Indigestion and faulty circulation due to heart weakness are almost constant. He thinks the bacillus is being relegated to a far less prominent position than formerly, and we should devote our efforts to remedying the physical and mental depreciation due to inheritance. His creed would be: "I believe in the inherent ability of the cells of the body to maintain the tissues in a healthful condition, both by destroying diseased germs and neutralizing the products of their activity. In order that this be done their potency must be maintained at the highest standard." For this purpose we must have pure air, sunshine, intelligently selected dietary, abstinence from alcohol, tobacco, etc. Blood examinations are sometimes of interest, but never of pronounced diagnostic value; the results of urinary examination are only of general significance. He believes in the tuberculin test as permissible if lack of time does not permit delay. There are no specifics. The α -ray is only of value in the diagnosis. He has not found it of value in locating cavities. Its use for therapeutic purposes was disappointing in fifteen cases thoroughly tested, though its effect in relieving pleuritic pains was marked. He concludes that we should remember that in temporarily relieving the patient of a symptom we may use drugs that have a bad general effect.

9 and 10. **Climatology of California.**—McAdie, in this article, sums up the advantages of the California climate. Sanborn takes up the same subject, limiting his remarks to the region beginning at the mouth of Cajohn Pass and encircling the East San Bernardino valley, taking in Riverside just across the divide, and other localities near at hand. This excludes the coast climate, but gives that of almost every other variety from that of the desert below the sea level to an altitude of about 10,000 feet. He remarks especially on temperature changes and notices the nervous troubles which seem to prevail, part of which he thinks are due to the constant eye-strain from perpetual sunshine, but perhaps the most important factor is nostalgia. He thinks, as the country develops, conditions for recreation and contentment multiply, and in the near future nervous troubles will be less and less prevalent.

11. **The Climate of Maine.**—Hinsdale remarks on the health conditions and on the decrease of consumption in that state during the last ten years, which has amounted to 15 or 20 per cent.

12. **Cervical Lacerations.**—The medical treatment of cervical lacerations is advocated by Bushong, who thinks that operations may be overdone. He finds Monsel's solution the best medicinal application in promoting absorption and removal of cicatricial tissue underlying mucous membrane. He uses the tampon, applied after local treatment, and considers it an important factor in the management of the cases. When the mucous membrane is broken or eroded he finds the best results in healing erosions come from a combination of pure tincture of iodine and beechwood creosote, using it before applying Monsel's solution for its action on the deeper structures. The frequency of these applications must be carefully considered. If the patient is very sensitive, once a week is sufficient, suspending treatment about three days before expected menstruation, and not resuming it until the fourth day after cessation of the flow. In very bad cases it is wise to make a visit every five days, and to apply the iodine at every alternate visit, using only the iodine and creosote at the others. If there is too much irritation the condition will be relieved by leaving out Monsel's solution for a few treatments, resuming it when tenderness has passed. He reports cases showing the benefits to the cervix from local treatment.

17. **Pleural Endothelioma.**—Delafield reports four cases of primary endothelioma. He remarks that it is generally agreed that the primary new growths of the pleura originate in the lymphatics and are endothelial in their nature. The symptoms can hardly be distinguished in the beginning from ordinary pleurisy with effusion. Only the bloody serum and low temperature are suspicious, but as the weeks follow each other the loss of flesh and strength and the appearance of the patient suggest malignancy.

18. **Radiotherapy.**—Allen has treated a number of cases of cancer and other cutaneous affections with the α -rays, and finds a decided value in the treatment. Out of 50 cases of cancer 20 were discharged as clinically cured, 4 as improved, 10 were still under treatment and improving, and only 3 cases were discharged as unimproved, 2 were referred for surgical operations and 5 ended fatally. Eleven cases were as hopeless at the beginning of treatment as all who have to do with breast and uterine cases and cancer of the rectum know. He thinks he has observed a tendency of the tubes to produce dermatitis irrespective of their vacuum, or of any idiosyncrasy on the part of the patient. He does not believe that a surgical operation should necessarily precede the α -ray treatment. He has also used it in a great variety of skin affections, including lupus, psoriasis, eczema, acne, lupus erythematosus, xeroderma pigmentosum, favus, ringworm, leprosy, lichen planus, etc., and has secured in many cases better and quicker results than by the older methods alone, though he does not rely on it solely. In Hodgkin's disease and internal sarcoma, though he has no cure to report, he has had some gratifying improvements.

20.—See abstract in THE JOURNAL of October 25, p. 1066.

21.—See abstract in THE JOURNAL of October 4, p. 854.

22. **Epilepsy.**—Thomson concludes his article in this issue. After first noticing the necessity of looking after the reflex centers and the coexistence of focal cortical disorders, he mentions cases where the reflex center was in the nose, but states that the greatest area is in the throat and pharynx. The gastrointestinal tract is also a well-known seat of afferent irritation. The mechanism of the action of the bromids is partly by their reduction of the peripheral sensibility in the pharynx. Other remedies that he mentions are coal-tar sedatives, especially antipyrin, which increases the specific action of the bromids, also chloral. The great aim in the treatment of epilepsy is, however, in prophylaxis, and it is in the gastrointestinal tract that the commonest autoinfection is to be found. Intestinal antiseptics are usually required earlier or later in the treatment. Imperfect kidney elimination is also a cause. He especially notes the value of life in the open air as a remedial measure. He gives a high estimate of the curability of epilepsy, and thinks that the prognosis for complete cure in average cases is about 70 per cent. The reason why the actual cures do not reach this figure is because the patients will not follow out the treatment; they grow careless after more or less prolonged freedom from attacks. The incurable patients are those in whom an intracranial cause of afferent derangement has been operative from early life, and those in whom the epileptic habit has been engrafted on a poor constitution from youth, though many of these recover.

23. **Ringworm.**—The infection from ringworm cases is studied by Newborn, who sums up in the following: "1, that differences of soil modify the clinical picture of a skin ringworm as well as the microscopic appearance of the fungus; 2, that in the fluid of a herpetic vesicle the mycelium of a microsporion may produce external grape-like spores; 3, that the yellow and brownish bands and the tangential fringe on beer-wort agar can be used to identify the source of infection in ringworm of the cat."

25. **X-Rays.**—From his experience in the treatment of many cases, Rudis-Jicinsky lays down the following general rules: 1. Know the capacity of the apparatus, remembering that the so-called α -ray burns are produced with a static machine as well as a coil. Learn every point in regard to the individuality of the tube. For superficial growths use a "soft" or "soft medium" tube with a spark gap of two inches; for internal growths a "high vacuum" tube with a spark gap of four inches. Try each tube before each application. 2. Thoroughly examine the case. Know the patient well. Protect the hair and eyes and the healthy tissue, if necessary, with lead and rubber; the latter to prevent shock by induction. Ray all the suspicious parts in as large an area as possible. 3. The length of exposure depends not so much on the time during which the tube

is in action, as on the actual time of best x-ray production, tested occasionally by the fluoroscope. The exposures are to be made according to each individual case, five minutes at first, and after a week, for ten minutes. If, two weeks after the first exposure, no reaction has been shown, the patient has no idiosyncrasy and may be irradiated every second or third day, and finally every day until intense reaction shows itself. The distance at the first application should be six inches, later less than that. If itching of the skin follows, stop the treatment for a while. 4. If it is unwise to treat the whole diseased surface at once, begin at the edges. If there are a few isolated nodules after the general surface of the growth begins to look better, a change of treatment is needed, and the nodules have to be attacked more vigorously. 5. Watch the progress and the results of the treatment carefully, and see whether the case is one for operation with the treatment or not. 6. Protect yourself and be prepared for all occasions, having in your office or laboratory a sign, perhaps, like this: "X-ray examinations and treatments at the risk of the patient. All possible and professional skill used."

27. Post-Operative Abdominal Cases.—Deaver and Müller report some methods used in the German Hospital at Philadelphia. They find shock unimportant as a sequel in case the operation has been performed rapidly and thoroughly. Stimulants such as strychnia, atropin, whisky, and camphorated oil hypodermically, with hot water bags and the use of hot saline solution by the bowel cause rapid reaction. Hypodermoclysis is not used as it is too cumbersome and slow. Where shock is due to hemorrhage the patient almost invariably recovers under this treatment, but this is not the case where there is septic absorption, which gives the same symptoms. In clean cases the patient is kept on the back for twelve to forty-eight hours, the time depending on the length of the incision. When the gauze drain has been employed the patient is slowly turned by supporting pillows to one side at the end of seventy-two hours. With glass drainage no change is permitted, except alternate raising of the hips on pillows. In clean cases without drainage asafetida suppositories are given every three hours, and unless the pulse demands strychnia, no medication is used. Water is not given until eighteen hours or longer if nausea persists, though the mouth may be washed out and the lips moistened. Backache is often an annoying and painful sequel. Very hot water bags or a cold water bag may be tried, but nothing usually gives relief except change of posture. This is preferable to morphin. In ten or twelve hours after the operation flatus will be passed. If it does not pass for eighteen hours an enema of milk of asafetida may be given, 60 c.c., in an equal quantity of warm water. It is a mistake to give morphin in these conditions. If the asafetida enema fails one or two ice bags on the abdomen and a high enema of turpentine, glycerin and magnesium sulphate in the proportion of one, two and three, is employed. On the third or fourth day after the operation the bowels are moved with a plain enema or with a glass of citrate of magnesia. Twenty-four hours after operation they begin giving nourishment, first milk and lime water, 5 to 10 c.c. of each every hour, rapidly increasing the quantity if well borne. On the second day chicken broth, beef tea and junket may be given with the milk. On the third, wine-jelly and gruel may be added, and from then on the diet is gradually increased until by the seventh day the patient is getting about 300 c.c. of nourishment. If the temperature is high after the bowels have moved, they look for stitch abscesses, and usually apply flaxseed poultices. In clean cases the wound is rarely dressed until the eighth day, when the stitches are removed. In drainage cases the glass is removed in two to four days, depending on the discharge; the gauze is removed from the sixth to the twelfth day, depending on the force necessary to loosen it. The rubber drain is shortened from day to day as the wound granulates up from the bottom. In removing the gauze drain, boric acid should be used for irrigation as the adhesions may not be perfectly formed and a bichlorid or carbolic solution might arouse a peritonitis. They call especial attention to the use of gastric lavage for the nausea and vomiting. The stomach usually recovers its tone in a few hours, but in other cases this method may be required. They have

never seen any serious depression or hematemesis following the use of the stomach tube, nor have they ever introduced the tube into the trachea, and think it could not happen with ordinary care. Where there is paresis of the bowel lavage is remarkably beneficial, as also in cases of cholelithiasis with gastric disturbance and especially in those cases re-operated on for gastro-hepatic adhesions. It is their routine practice to wash out the stomachs of such patients every six hours for the first twenty-four hours after the operation. Purgation is the sheet anchor in the treatment of peritonitis, but it can not be used in case of vomiting, and lavage sometimes seems to work well. They wash out early and introduce 30 to 60 gm. of Glauber's or Epsom salts, sometimes adding 30 c.c. of whisky or a pre-digested food.

20. The Diet in Typhoid.—Robertson advocates a freer diet in typhoid, believing that it will diminish the number of deaths from asthenia and intercurrent affections and lessen the increased liability to perforation.

30. Foreign Bodies in the Vermiform Appendix.—Bell reports two cases, one in which there was a pin and in the other a gallstone producing the trouble in the appendix. He thinks while it is unquestionable that foreign bodies rarely cause appendicitis, it is worth while to put these cases on record.

34. Nail Disease.—Eczema produces the most frequent examples of nail disease, furnishing 107 out of 485 cases on which White's paper is based. It is due to the same causes as bring about an eczema of the skin, and it causes total loss of the nail. Unless the matrix is affected in trauma or felon, the results on the nail are unimportant. Paronychia comes third in importance, providing 68 cases. Psoriasis is almost an equally common disturber of nail equilibrium, while involvement of the nails in cases of cutaneous psoriasis is much commoner than is the rule in eczema. The prognosis, he thinks, is generally good, but he has seen cases where the nails did not return again. There were 62 cases of nail implication in dermatitis of the hands and fingers directly attributable to some noxious occupation or chance poisoning of the skin. The commonest symptom is koilonychia, which appeared in about 40 per cent. Syphilis of the nail is not a common condition, found in only about 5 per cent. of his cases. It occurs both in the primary and secondary forms. Tinea trichophytina is a very rare condition, usually caused by the megalosporon; tinea favosa is a little more common. The clinical appearances of the two diseases are quite similar. Tinea favosa may be contracted from domestic animals. Russian Jews seem to be specially liable to it.

43.—See abstract in THE JOURNAL, xxxviii, p. 1176.

44.—See abstract in THE JOURNAL of October 25, p. 1065.

49.—See abstract in THE JOURNAL of October 25, p. 1066.

54.—This article has appeared elsewhere. See THE JOURNAL of November 8, title 142, p. 1210.

63. Morphin.—The indiscriminate use of morphin by physicians is deprecated by Crothers, who calls attention to the possibility of its producing narcomania and the danger, although the physician may conceal from the patient what drug he is taking, of its being revealed to him later in the case of change of doctors. Proprietary drugs given for the purpose of controlling pain also contain dangerous and uncertain narcotics and should be avoided. Many obscure diseases may be traced to reckless medication of this kind.

64. Alcohol.—Cushing pleads for alcohol a place in therapeutics as a narcotic and to a less extent as a stomachic, and in certain conditions as a food. He does not deny the fact that it has drawbacks, like every other drug, but we should not be guided entirely by consideration of any one of its properties, but estimate the total of its effects, good and evil, as regards the special condition.

65. Methyl Alcohol.—The action of methyl alcohol is reviewed by Hunt, who gives the results of his own experiments and the experience of others with this agent. Even when free from impurities it is dangerous and it is totally unfit as a

substitute for grain alcohol in any preparation which is to be taken internally, especially those to be given for any length of time.

72.—This article has appeared elsewhere. See *THE JOURNAL* of October 25, §36, p. 1072. See also editorial, November 22, p. 1327.

75. **The Blood in Pregnancy.**—The conclusions reached by Pray from examination of the blood in pregnancy and the puerperium are given by him in the following: "1. Where blood generation fails to keep pace with the increased vascular area, a serious dilution of the blood takes place. 2. In the majority of cases this is not serious, and can be overcome by simple hygienic measures—fresh air, good food and the overcoming of constipation. Cases in which the vitality is overtaxed by the increased demand for nutrition may call for iron or other hematinic treatment. 3. The regeneration of the blood is partly effected by the lessening of the vascular area after labor and subsequent transudation of fluids of the blood into the tissues. 4. The leucocytosis is due to increased action of enlarged lymph glands of the pelvis, and in part to increased metabolism, which causes a somewhat toxic condition. Its decrease is caused by the lochial discharge. Its persistence is accounted for by the fact that the involution of the hypertrophied pelvic organs and breasts is accomplished in a great measure by the leucocytes. 5. A study of the blood of a woman delivered by the Cesarean operation shows the same general behavior of the blood constituents as does that of women after normal labors."

77.—See abstract in *THE JOURNAL*, xxxviii, p. 1667.

79. Ventrofixation and Ventrosuspension of the Uterus.

—After discussing the indications according to which these operations are performed, Kreutzmann expresses the view that they are only relative and that as surgical procedures these operations create an unphysiologic condition. The remote consequences are sometimes disastrous to the health and life of the subject, and even grave disturbance of the normal progress of gestation is occasionally observed. These are not indispensable operations. While it may be said sometimes that it is right to propose a surgical rectification of a backward displaced uterus, fixed or movable, it should be devoid of danger to the life and health of the patient, immediate or remote. In women of childbearing age it should be free from the danger of interfering in the least with the normal progress of pregnancy and delivery. Ventrofixation and ventrosuspension as usually performed are not thus devoid of danger. In vaginal fixation (in nonparous women) and in shortening the round ligaments (by either vaginal, intra-abdominal or inguinal route) we have at our disposal operations which, if properly selected, combine efficiency with absolute freedom from danger.

86. **Collodium After Nose Operations.**—Pischel finds collodium a satisfactory local application in the after-treatment of nose operations. When through with the operation (removal of hypertrophy on lower turbinal, for example), he touches the wound several times with adrenalin to stop the bleeding, and then drops collodium on the wound while an assistant blows compressed air into the nose to accelerate evaporation. The collodium forms a firm white membrane, which protects the wound against infection and prevents secondary hemorrhages. He has used it in thirty-one cases and has not had one secondary hemorrhage, and it is not uncomfortable as the patient is under cocaine anesthesia. It should be dropped on the wound carefully and slowly so that it will not run down into the pharynx and make the patient cough. One might use a fine Eustachian catheter, on the wider end of which a small rubber bulb (a dropper) is mounted and fastened air-tight with a rubber band. One filling of the bulb with collodium is usually enough to cover the whole wound.

89. **Trichloracetic Acid.**—Schwabe has investigated the action of trichloracetic acid on the mucous membrane. He finds that it acts only superficially, but destroys the epithelium, and is an excellent means for producing this effect. Galvanocaustic scabs are favorably influenced by the application of this acid. It seems also to be useful by forming a superficial protective layer that prevents the settling and developing of those

bacteria which have entered the nose within the region deprived of its physiologic protection. Its property of closing up all the channels discharging from the surface of the turbinals renders it applicable in the treatment of hay fever. He has employed it in numerous cases of nasal hydroporrhea with excellent results. The acid apparently enters into combination with the albumin of the glandular duct secretion, and thus prevents the fluid from being discharged for several days.

94.—See abstract in *THE JOURNAL* of November 8, p. 1205.

95.—See abstract in *THE JOURNAL* of November 8, p. 1204.

97. **Pseudo-Rheumatism.**—A number of conditions resembling rheumatism are reviewed by Walsh, who concludes that acute articular rheumatism would seem to be an acute infectious disease and with no more necessary relation to such pathologic changes in joints, as are exhibited in milder or severer forms of arthritis deformans, than certain other infectious diseases. The so-called chronic rheumatism, with degenerative changes in joints, partakes rather of the nature of arthritis deformans than of a true rheumatic process, and should be treated accordingly. Muscular rheumatism, so-called, is usually not an acute infection in any way similar to acute articular rheumatism, but the painful conditions in muscles spoken of as rheumatism are really due to blood dyscrasia and certain toxemias, or to functional arthritic nervous conditions, causing reflex pain in muscles around joints, or to certain occupations in which muscles are overused or improperly employed, and finally to such joint relaxations as occur from flat-foot or dislocation or frequently repeated or severe sprains.

98.—See No. 72 above.

103. **The Heart in Pneumonia.**—The importance of an examination of the condition of the heart in pneumonia is insisted on by Wainwright, who describes the mechanism of dilatation and failure of the right heart in this disease. Its hypertrophy may be an important factor in producing pneumonia and other pulmonary diseases. He calls attention to one especially valuable physical sign, the pulmonic element of the second sound of the heart, which is underestimated by the profession. In young children this element is accentuated, and at the middle period of life the pulmonic and aortic are about equal in intensity, while in old age the aortic element becomes accentuated under normal conditions. In pneumonia, this well-pronounced accentuated second pulmonic sound becomes a safe guide for the administration of cardiac stimulants and aids in making an intelligent prognosis. A diminution of intensity of this sound is a confession of failure of the right heart, and should be a signal for the use of digitalis, alcohol and other cardiac stimulants. The rapid and weak pulse is not so reliable. He speaks in regard to the use of digitalis, that when not indicated it is a pernicious drug, but when it is really indicated nothing is better. In the discussion following Prof. Andrew H. Smith takes a somewhat different view as regards the use of digitalis, holding that it has often done more harm than good. Its use is pernicious except when there is arrhythmia, indicating heart failure, then it may be of use to steady it.

108.—See No. 72, above.

109.—*Ibid.*, November 15, title 26, p. 1278.

115. **Diagnosis of Tuberculosis.**—The points specially called attention to by Milroy are the need of care as to the clinical history, symptoms of failing strength without assignable cause, indigestion, increased heart action, cough with or without expectoration, hemorrhage and a careful study of the temperature. He agrees with Hobbs that all cases with a mean temperature of 99.5, which is not much above the normal range, are predisposed to tuberculosis. The two diseased conditions with which incipient phthisis are most frequently confused are probably malarial fever and dyspepsia. He notices particularly the need of attention to the quality rather than the quantity of sound in percussion and the securing of proper breathing on auscultation. The disease is especially liable to manifest itself about two inches below the middle of the sternum in front, or in the suprascapular region behind or in the apex of the lower lobe behind or the apex of the right

middle lobe, which is found in the midaxillary line at the fourth interspace.

117. Tuberculosis.—Johnson recapitulates the argument that the preponderance of evidence indicates that the germs rarely if ever reach those portions of the lungs, which are most frequently the seat of primary tubercular foci, through the air current, but usually through the circulatory system. It does not necessarily follow that they are absorbed from the walls of the air passages, but that they might have been absorbed at other points, as the alimentary tract. The primary foci of pulmonary tuberculosis in man are most frequently in the smaller lobes of the lungs, which are frequently in a collapsed condition and where germs would be less likely to enter through the air channel. Their seat indicates an abnormal condition of the parts at the time of attack rather than the source through which they entered the system. Koch's statement that inhalation is the chief cause is, therefore, erroneous.

120. Technic of Prostatectomy.—The method described by Bryson is the perineal one, in which, after the introduction of the staff, he makes a free median incision in such a way as to open the urethra just in front of the apex of the prostate. The forefinger is introduced and the staff withdrawn. Guided by the finger a blunt instrument is passed into the urethra and made to puncture, from the urethral side, the lowermost part of the mass. The puncture is always made in the lower posterior quadrant, and the instrument pushed well into the swelling. The finger follows, tearing its way in the opening through the capsule and loosening the lobe as far as its attachment to the urethra from which it is detached, care being taken not to take away too much of the sides nor any of the roof of the urethra. The hypertrophied lateral lobe is then removed. The process is repeated on the opposite side, after which a median posterior segment sometimes remains to be dealt with, which can easily be excised. Usually the finger can be then passed into the bladder, which is explored. The cavity is irrigated with a hot salt solution and a loose flap of mucous membrane found that can be made to occlude the vesical vault. Care should be taken not to push this back into the bladder when a large drainage tube is introduced and the cavity packed with gauze. This technic is modified to some extent according to the size of the prostate, as the incision must be made to correspond. In some later cases he has done a preliminary epicystotomy for drainage and for the treatment of the bladder and kidneys, and he thinks it is best, when this is to be done, to make it a preliminary operation.

121.—See abstract in *THE JOURNAL* of July 5, p. 40.

122. Middle Cranial Fossa.—Bartlett describes the anatomical conditions in the middle cranial fossa with special reference to the occurrence of the middle meningeal artery. He finds it impossible to formulate any rule for avoiding this in making a bone opening for removal of the Gasserian ganglion. It can hardly be said to follow the same route in any two cases. We should realize the possibility of meeting the artery at almost any point in the temporal fossa or even outside the protecting wall. He also calls attention to the faulty description of the field of operation. He describes certain anomalies of the meningeal artery and says that this vessel is most easily avoided at the point where it enters the cranial cavity. He also notices those cases which have the second and third branches of the trifacial closest together.

123. Gastroenterostomy.—Fowler has devised a method of gastroenterostomy, which consists of first securing a communication between a loop of the jejunum and the stomach, then an entero-enterostomy between the afferent and efferent portions of this loop, and finally, obliteration of the lumen of the afferent loop between the two points of the anastomosis, by passing a No. 20 silver wire two or three times around the afferent loop at the point selected, and drawing on the turns sufficiently to occlude the lumen without strangulating the wall. The ends are twisted together, cut short and rolled into a flat coil in such a way as to bring the cut ends in the coil, thus guarding against subsequent injury to the surrounding structures. He reports cases.

124. Hypertrophic Tuberculosis of the Intestine.—After a detailed description of the conditions in a case, Harris discusses the etiology, morbid anatomy, symptomatology, diagnosis, prognosis and treatment. Of course, it is only capable of operative relief. The statistics as regards operation are on the whole encouraging. There were 60 cures and 4 cases improved out of a total of 88 operated on.

125.—See abstract in *THE JOURNAL*, xxxviii, p. 1467.

126. Fracture of the Neck of the Femur.—Whitman criticises the familiar methods of treatment of this injury, which he says is misrepresented in text-books as being uncommon, excepting in old age. The methods, he thinks, are faulty both in conception and practice, if intending reposition and retention of the parts in the normal position. Abduction of the thigh would be much more likely to bring the parts into position than when the limb is held on a line with the body. If reposition were attained it could be kept secure with the long spica bandage with fixation in abduction. He has also modified the after-treatment of some of these cases, using the ordinary hip splint as a traction appliance, or as a simple perineal crutch in after ambulation. When replacement is impracticable as in the ordinary type of coxa vara, he would remove a wedge of bone from the base of the trochanter, preserving a portion of the cortex at the apex of the wedge on the inner side of the femur, opposite the trochanter minor, and then retain the limb in the position of complete abduction until union is complete.

128.—See abstract in *THE JOURNAL* of July 12, p. 101.

129.—See abstract in *THE JOURNAL* of October 4, p. 854

130.—*Ibid.*, September 27, p. 790.

131.—*Ibid.*

132. Pelvic Suppuration.—Williams pleads in this article for the abdominal over the vaginal operation. He says that, with all that is said about the simplicity of puncture method and drainage by the vaginal route, with speedy relief and recovery, he wishes to say that aside from the mortality, which is not small, the number of invalids leaving the hospital is very large, and the number that return for subsequent operation is also great. The mortality is smaller and recovery more satisfactory by abdominal section.

133.—See abstract in *THE JOURNAL* of September 27, p. 790

134.—*Ibid.*, November 1, p. 1133.

135.—*Ibid.*, September 27, p. 790.

136.—*Ibid.*, November 1, p. 1133.

137.—*Ibid.*, September 27, p. 790.

138.—*Ibid.*, November 1, p. 1133.

139.—*Ibid.*, October 4, p. 853.

141, 142, 143 and 144.—*Ibid.*, November 1, p. 1133.

145.—*Ibid.*, p. 854.

147.—See No. 72 above.

153. Affections of the Nails.—After first noticing the rarity of typical onychomycosis trichophytina, the difficulties of its diagnosis and the unsatisfactoriness of treatment, Levisaur mentions a special form of nail disease and the probability of its parasitic origin, though he has not been able to isolate any vegetable parasite. The individual lesions are minute, round, shallow holes of the size of a very small pinhead, arranged sometimes in regular concentric lines, covering sometimes the whole surface of the nail-plate. When recovery occurs it starts from the proximal end and they slowly disappear. The nail is not shed. The cases in which he has observed it are all adults; five of the nine cases had seborrheic eczema of the scalp or elsewhere. Pruritus, especially of the anus, seemed to be a common accompaniment. Salves seemed to have little effect, and frequent manicuring aggravated the disease. In four cases cure was produced by the use of a 1 per cent. solution of permanganate of potash; bathing with this for about ten minutes twice a day, followed with an oxalic acid solution (2 per cent.). He is inclined to think that the disorder has some connection with Unna's seborrheic eczema, but no relation with ringworm or psoriasis. The occasional combination of the pathologic

changes of the nails and pompholyx seemed to have escaped the attention of others, but he has observed a number of cases where the matrix of the nails was affected. Ordinary eczema localized on and around the nails is usually readily recognized. He also notes occupation diseases of the nails. Favus of the nails is not nearly so rare as ringworm and is more easy to diagnose. He thinks avulsion of the nails is indicated where the disease has made much inroad. For the milder cases a saturated solution of potassium iodid and metallic iodine may effect a cure. Caustics should be avoided. Koilonychia is, he thinks, due to pathologic changes of the nail bed. As to onychorrhexis it is uncertain whether it is to be called a disease of the nails or only a nervous trophic symptom.

154. Nevo-Carcinoma.—Ravogli reports two more cases of nevo-carcinoma and discusses the condition. He concludes that the nevi frequently cause the carcinoma, not by any included embryonic cells, but because of the frequent bruises and irritations to which they are exposed.

158.—See No. 72 above.

160. Personal Injuries.—Both sides of the personal injury question are shown up by Lodge. He gives instances of the mania for litigation and the methods of many of the plaintiffs and also of the questionable methods adopted by the companies in meeting these attacks. He sees no remedy but one, that is, absolute honesty on the part of all parties, jurors, plaintiff, defendant, judges and expert witnesses.

161. Postmortem from the Medicolegal Standpoint.—The necessity of a thorough postmortem as a furtherance to justice, etc., is insisted on by Lane, who severely criticises some cases that have occurred, including the Luetgert case in Chicago, for instance, with its wild and extraordinary claims on the part of so-called experts.

163.—See above title 139.

167. X-Rays.—Brokaw's article is fully illustrated with pictures of the results of the x-ray treatment. He offers the following points from his six years' experience: Much study is required; the method can not be learned quickly. The most efficient apparatus should be used. When great penetration is necessary high tubes should be employed, and the most powerful coils, capable of generating sparks at eighteen or twenty inches. He holds it will soon be recognized as a proper procedure to subject all inoperable cases to the rays, not in a haphazard manner, but with the tube carefully adapted to each particular case. It is also good practice to subject all patients to the x-rays after operation as a prophylactic measure, and he especially advocates this in case of mammary cancer. He does not object to setting up a dermatitis, but brings this about as soon as possible. He always tans the parts, however, before he actually attacks the growths with a hard tube, if the use of such is indicated. To avoid unfortunate results, white gangrene, etc., one must proceed with caution. Idiosyncrasies are not to be forgotten. He has noticed a susceptibility to the rays in cases of chronic rheumatism, in elderly subjects with faulty vascular conditions, such as senile changes, and in certain alcoholics. The practice of using a high tube from time to time often hastens and brings about curative effects in a most rapid and satisfactory manner. In growths of a considerable area it is well to direct the rays to the periphery as that is where the healing commences most actively.

168. Gynecologic Diseases Without Local Symptoms.—From a review of the literature and a study of the reported cases, Gellhorn offers the following conclusions:

1. Diseases of the female sexual organs occur sometimes without local symptoms, but at the same time may produce disturbances in remote organs.
2. If these disturbances are transmitted by way of the nerve tracts they must be considered to be genuine genital reflex neuroses and can be differentiated from hysterical manifestations.
3. Not every ailing woman should be subjected to a gynecologic examination at once. But in the absence of sufficient cause elsewhere, or when a rational treatment has proved ineffective, the possibility of pelvic disease should be borne in mind.
4. In the climacteric woman a gynecologic examination should be early made in every somewhat suspicious case to facilitate the discovery of the possible existence of a malignant growth and to ameliorate the otherwise grave prognosis by the introduction of an adequate treatment.

182.—See title 72 above.

188. Endocarditis.—The conditions in which endocarditis occurs, its cause, and consequences are discussed by Chapman, who reports cases showing its effects. He insists on the importance of heart complications in disease, both as regards the immediate and ultimate outcome. The teaching that endocardial changes are of but slight consequence, and that little can be done in treating heart cases, and that digitalis is the beginning and the end of cardiac therapeutics, are mischievous, as they set at naught the results of many observers and investigators, and lack the optimism which should characterize all research. Minuteness of observation, discrimination in therapeutics and careful attention to the details of treatment only can bring clinical results.

189. Anesthetics.—The fatal cases of anesthesia are classified by Miller under the following heads: 1. Those where the anesthesia was blamed because no other cause of death was recognized. These are only of interest because of their frequency. 2. Cases in which the effect of the anesthetic on organs already diseased hastened the inevitable fatal termination. This mortality can be diminished by careful preliminary examination and preparation of the patients and by attention to the selection of the particular anesthetic to be employed. Instead of sticking to ether in every case, we have at our disposal cocaine, which has an indefinitely wide field of usefulness, nitrous oxid with practically no mortality for brief operations and sometimes longer ones, and chloroform, which may be safer in certain conditions as in the young and very old, kidney and lung disease, diabetes, in the obese, in dyspnea from any cause, narrowing of the larynx, and in operations about the brain and mouth. The combination of oxygen with ether or chloroform may save patients who can not otherwise undergo the anesthetic. In the third class where deaths are due to improper administration or overdose of anesthetics the difficulty is twofold, and consists of inappreciation of the potency of the agents employed and in a lack of understanding between surgeon and anesthetist. Medical schools slight the subject, hospitals pay little attention to it, in private practice anesthetics are daily administered by those who have no experience and have not studied or interested themselves in the subject. Bungling administration, overloading the lungs with the anesthetic at any one time are responsible for some of these cases. The anesthetist should have a thorough knowledge of the physiologic action of drugs, and there should be no misunderstanding as to the immediate responsibility. He is in a better position to observe the general condition of the patient than the operator, and should have chief consideration in this respect.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal (London), November 8.

- 1 *Intraperitoneal Hemorrhage Incident to Ectopic Gestation. Charles J. Cullingworth.
- 2 *An Operation for Gallstones with the After-History of a Series of Cases Operated On. Rutherford Morison.
- 3 *A Discussion On the Treatment of Chronic Enlargement of the Prostate. P. J. Freyer and others.
- 4 *Perineal Prostatectomy by a Special Method. Parker Symes.
- 5 The Purse-String Suture in Gastroenteropathy for Gunshot Wounds: An Experimental Contribution. N. Senn.
- 6 *The Diagnosis of Urethral Diseases. Ferd C. Valentine.
- 7 Thirty Cases of Gastro-enterostomy for Non-malignant Affections of the Stomach. T. Kennedy Dalziel.
- 8 *Renal Decapsulation Versus Nephrotomy. Resection of the Kidney and Nephrectomy. George M. Edebohl.
- 9 *Value of Blood-counts in Abdominal Diseases. C. Nepeau Longridge.
- 10 *Union of Intestine. E. Stanmore Bishop.
- 11 Case of Resection of the Stomach: Patient Well Eighteen Months Later. A. W. Mayo Robson.
- 12 *The Removal of Deformities of the Nose by the Subcutaneous Injection of Paraffin. Walker Downie.
- 13 *The Radical Cure of Femoral Hernia. Jas. Henderson Nicoll.
- 14 *Rodent Ulcer: Its Pathology and Treatment. Joseph D. McFeely.
- 15 Modified Vulliet's Nephropexy Simplified by the Use of a Swivel-tenotome. J. Lynn Thomas.

The Lancet (London), November 8.

- 16 Intra-peritoneal Hemorrhage Incident to Ectopic Gestation. Charles J. Cullingworth.
- 17 *Round-about Constipation. James F. Goodhart.

- 18 *The Nature, Causes and Treatment of Cardiac Pain. Alexander Morison.
- 19 An Analysis of a Series of 500 Consecutive Operations for Primary Cataract Performed in Five Months in the Government Ophthalmic Hospital. R. H. Elliot.
- 20 Tape-worms as a Possible Cause of Diabetes. Joseph E. Judson.
- 21 Case of Large Dermoid Cyst Complicating Labor. Bryce J. Macaulay.

Indian Medical Gazette (Calcutta), October.

- 22 *Note on Serum Reactions and the Temperature Curve in Chronic Malaria, Including Kala-azar. Leonard Rogers.
- 23 *Note on Kala-azar. J. Dodds Price.
- 24 A Note on Dengue Fever. W. G. Pridmore.
- 25 Further Note on Intestinal Sand. C. H. Bedford.
- 26 A Method of Direct Cultivation. E. R. Rost.

Journal of Tropical Medicine (London), November 8.

- 27 *Notes of a Tour in the North Canara District of India in Search of Mosquitoes. E. H. Aitken.
- 28 *A Reply to Dr. Braddon's Paper On an "Undescribed" Hematozoon to Be Met in the Malay Peninsula. J. T. Clarke.

Hospitalstidende (Copenhagen), xlv, August 27 to October 29.

- 29 (Nos. 35 and 36.) Appendicitis obliterans. Knud Faber.
- 30 (No. 37.) *Transmission of Tuberculosis from Man to Cattle. J. Fibiger and C. O. Jensen.—Overførelse af Mennesketuberkulose til Kvaeg.
- 31 (No. 38.) Tattooing Among Prostitutes. R. Bergh.—Om tatovering af prostituerede.
- 32 (No. 39.) Fibrinosa s. crouposa s. pseudomembranosa.

- 33 Three Cases of Foreign Bodies in Air Passages. U. Hansen.—3 Tilfælde af Fremmedlegemer i Luftvejene.
- 34 (No. 40.) Cryoscopies i den funktionelle Nyredningsstiks Tjeneste. Nordentoft.
- 35 (No. 42.) Length of Diphtheria Bacillus. P. Heiberg.—Differenciellens Længde.
- 36 1 Tilfælde af ensidig partiell Nephritis chronica, behandlet med Nephrotomi. S. Nordentoft.

Bulletin de l'Academie de Med. (Paris), October 28.

- 37 *Improved Writing and Reading Apparatus for the Blind. Laborde.—La reglette Dussaud.
- 38 La vaccine obligatoire en Alsace-Lorraine. Hervieux.
- 39 Sur l'épizootie de Surra qui a régné en 1902 à l'île Maurice. A. Laveran.

Semaine Medicale (Paris), October 15 to 29.

- 40 (No. 42.) Transmission à l'homme (to man) par inoculation accidentelle, de la tuberculose bovine, et réinoculation expérimentale au veau (of a calf). C. H. H. Spronck and K. Hoefnagel (Utrecht).
- 41 Traitement des suppurations chroniques du sinus maxillaire par la résection large de la partie inférieure de la paroi (wall) nasale du sinus. Cloaué.
- 42 (No. 43.) L'agitation, ses causes et son traitement. G. Deny.

Deutsche Med. Wochenschrift (Leipzig), October 30.

- 43 *A New Kind of Diphtheria Serum. A. Wassermann.—Ueber eine neue Art von D-Serum.
- 44 Ueber die Entstehung einer Malaria-Epidemie im Harlinger- und Jeverlande während des Jahres 1901. E. Martini.
- 45 *Nephritis syphilitica acuta. Waldvogel.
- 46 Origin of Basophilic Granulations in Red Corpuscles. P. Schmidt.—Zur Frage der Entstehung der basophilen Körner in den rothen Blutkörperchen.
- 47 *Significance of Typhoid Bacillus in Post-Typhoid Respiratory Affections. P. F. Glaser.—Die Bedeutung des Typhusbacillus bei Erkrankungen des Respirations-Apparates im Gefolge des Ileotyphus und sein Auftreten im Auswurf. (Commenced in No. 43.)
- 48 *Cancer Investigating Stations. I. Boas.—Ueber Untersuchungsstationen für Krebsverdächtige.
- 49 Frequency of Natural Lactation. H. Neumann.—Ueber die Häufigkeit des Stillens.
- 50 Report of German Colonial Congress, Berlin, October 10-11.

Klinisch-Therapeutische Wochenschrift (Vienna), ix.

- 51 (No. 36.) Zur speziellen Prophylaxe der Gonorrhoe bei Frauen. L. Jakobsohn.
- 52 Ueber die Wirkung des Human Body. J. Marer.—Ueber die verschiedenen Regionen des menschlichen Körpers. (Commenced in No. 32.)
- 53 Ueber die tertiären Syphilis. E. Weber. (Commenced in No. 33.)
- 54 (No. 39.) Ibid. J. Jadassohn (Berne).
- 55 (No. 40.) Tests of Artificial Foods on Various Generations of Mice. F. Röhmman.—Ueber künstliche Ernährung.
- 56 *Die medamentöse und symptomatische Behandlung der Lungen-Tuberculose. A. v. Weismayr. (Commenced in No. 37.)
- 57 (No. 41.) *Ueber die Anwendung des Pyoktanins in der Ophthalmologie und bei Cancroiden. G. Weill.
- 58 (No. 42.) Significance of the Thyroid Gland. A. v. Eiselsberg.—Die Bedeutung der Schilddrüse für den Haushalt der Natur.
- 59 (No. 43.) *Treatment of Affections of Testicles and Their Adnexa. J. Zabudowski.—Zur Therapie der Erkrankungen der Hoden und deren Adnexen.
- 60 Ueber subcutane Paraffin-Prothesen. L. Moszkowicz. (Collective Review.)
- 61 (No. 44.) *Examination of Visual Field to Control Treatment of Syphilis of Brain and Spinal Cord. O. Ziemssen.—Gesichtsfeldaufnahmen als Kontrolle in der Behandlung der Hirn- und Rückenmarkslues.

Muenchener Med. Wochenschrift, October 28, xlix, 43.

- 62 Ueber den Wert der Elastin-Färbung für die histologische Diagnostik. B. Fischer.

- 63 *Sahl's Test of Stomach Functions. Bönninger.—Ueber die Sahl'sche Methode der Functions-Prüfung des Magens.
- 64 *Cure of Noma Gangrene by Excision of Diseased Tissue. H. v. Ranke.—Ein weiterer Beitrag zur Behandlung des nomaartigen Brandes durch Excision des erkrankten Gewebes.
- 65 *Ovariectomy During Pregnancy. M. Graefe.—Zur Frage der Ovariectomie in der Schwangerschaft.
- 66 *Suture of Bladder After Sectio Alta. C. Hofmann.—Zur Frage der Blasennaht nach S. a.
- 67 Refutation of Objections to Paracentesis of Tympanum in Treatment of Acute Otitis. Grunert.—Ueber die neuen Angriffe gegen die Paracentese des Trommelfelles bei der Therapie der acuten Otitiden.
- 68 *A Review of 720 Gallstone Laparotomies. H. Kehr.—Ein Rückblick auf 720 Gallensteinlaparotomien, unter Berücksichtigung von 90 Hepaticus-Drainagen. (Commenced in No. 41.)

Gazzetta degli Ospedali (Milan), September 4 to November 2.

- 69 (No. 108.) *Indicanuria e sua importanza clinica. P. Porru-Costa.
- 70 *L'ematologia della cloronarcosi. U. B. Solimei.
- 71 *Il lupus vulg. curato con l'aldeide formica. G. Matteucci.
- 72 (No. 110.) Report of X Sanitary Congress, Mantua, September 4. (Commenced in No. 105.)
- 73 (No. 111.) *La scoliosi sciatica o segno di Vanzetti. D. Cappuccio.
- 74 Due casi di ipertrofia della prostata curati colla resezione del dotto deferente. P. Commandini.
- 75 *Un nuovo mezzo terapeutico per le forme catarrali croniche delle prime vie respiratorie. Della Vedova.
- 76 (No. 114.) Sulla presenza di cosiddetti batteri acidofili nelle feci dell'adulto. A. Cipollino.
- 77 Nota sui rapporti biologici tra liquidi organici. M. Segale.
- 78 Cancro e malaria. A. Rovighi.
- 79 *Contributo allo studio delle varici. L. Ronchi.
- 80 *Medicated Steam in Treatment of Carbuncle. S. Gucciardello.—Cura dei vespali senza taglio.
- 81 Alcune note intorno alla colorazione triacida di Ehrlich. C. C. Ducati.
- 82 (No. 117.) Splenectomy ed operazione di Talma per morbo di Banti all'3o stadio. Autopsia. F. Gangitano.
- 83 (No. 120.) La tuberculosi incipiente e il solco apicale del polmone. R. Pannori. (Anatomic Study.)
- 84 Per la genesi del lipoma. E. Alevoli.
- 85 Le ultime questioni riguardanti il latte nella pratica dell'allattamento artificiale. C. V. Peroni.
- 86 6 casi di fistola auris congenita. R. Luigi.
- 87 *Considerazione terapeutica sull'uso della lecitina. C. Serono.
- 88 (No. 123.) Sul potere di assorbimento e di eliminazione della mucosa vescicale. M. Bucco.
- 89 Osservazione su alcuni casi di recidive di febbri malariche in seguito a traumatismi. G. Perrod.
- 90 *Contributo sperimentale alla cura delle perforazioni e lacerazioni della cistifellea (gall bladder). L. Baldassari.
- 91 Due casi di actinomicosi umana. A. De Cortes.
- 92 (No. 126.) Report of XII Congress of Internal Medicine, Rome, October 28-31. Addresses on Intravenous Medication and Pathology of Nephritis.
- 93 Sopra 2 laparotomie con drenaggio alla Mikulicz per ferite penetranti. G. Recchi.

1. **Intraperitoneal Hemorrhage.**—Cullingworth's article reviews the whole subject of intraperitoneal hemorrhage from ectopic gestation, which is its usual cause. He notices the symptoms and discusses separately peritoneal hematocoele, which he credits as usually the result of bleeding from an ectopic pregnancy in the fimbrial end of the tube before it is thoroughly closed up. He points out the dangers of the neglected ovum and insists on the importance of the diagnosis of these conditions.

2. **Gallstones.**—The operation for gallstone here given by Morison is making a skin incision one inch below the tip of the twelfth rib, ending in front of the middle line, at the upper part of the middle one-third of a line drawn from the ensiform cartilage to the umbilicus. All the layers of the abdominal wall, including the rectus muscle, are divided, and the cut edges of the peritoneum caught in clip forceps. A thick gauze pad or sponge is then packed into the abdomen under the lower flap of the wound over the colon and omentum, shutting off access to the general peritoneal cavity in this direction, and on the inner side and in front the stomach is covered and protected by a gauze pad. The wound may be more thoroughly opened out by making the ileocostal space convex to the right and pushing the hips and shoulders to the left. Drainage is secured by a rubber tube, which in case of the gall bladder is fixed to it by catgut sutures and a thick broad strand of gauze through the wound posteriorly to insure its patency. Drainage of the common duct is effected by leaving an opening in the duct unsutured with a large tube apposed to it. He does not favor drainage of the hepatic and common ducts by tube in the lumen. The wound is closed with four tiers of catgut or with two of catgut and two of silkworm gut, the first bringing together at the sides the peritoneum, fascia, transversalis and

internal oblique muscle; the second the external oblique, the third secures the fat and skin subcutaneously to the external oblique, while the fourth is a subcuticular for the skin edges. When a silk-worm gut is used, the first layer of deep, far-distanced, interrupted sutures attach the skin to the external oblique muscle and bring the skin edges together roughly. The second intermediate interrupted suture through the skin edges completes the apposition, and in front the rectus and aponeurosis receive the same care. He tabulates and discusses his cases. They confirm the surgical belief that in most cases operation affords permanent relief and great improvement in the general health. Recurrence of symptoms means gall-stone trouble again.

3. Enlargement of the Prostate.—Freyer reports 6 cases of suprapubic operation for prostatic hypertrophy. He has performed the operation on 21 patients, varying in age from 58 to 79 years; the parts removed weighing from 1½ to 10½ ounces. All of them were advanced cases in catheter life, and in 19 of the cases an absolute and complete cure was obtained. One patient died in acute mania the twenty-fourth day after the operation, and the remaining case succumbed to heat stroke.

4. Perineal Prostatectomy.—Syms describes his method with his rubber retractor, the various advantages of which he points out. Its bulb acts as a hemostatic as well as holding the instrument in place. He objects generally to the suprapubic method, as he considers the perineal one safest and best. He has operated on 21 patients and has had no deaths. All had cystitis except one. A practical cure has resulted in every case except one, where the operation was incomplete.

5.—This article appeared in *THE JOURNAL* of November 8, p. 1182.

6. Urethral Diseases.—The details of the diagnosis of urethral diseases, including personal history, examination of patient generally, the urethral discharge, preparation of specimens, discharge of urine and its examination, urethral exploration and also examination of seminal vesicles and prostate are all included. The details are too numerous to be included here.

8. Renal Decapsulation.—Edebohl describes his well known method and reports cases operated on for other reasons than to cure chronic Bright's disease. He has yet to see the first (vital) effect attributable to decapsulation as such. The final results of some cases have been reported and others will be, later.

9. Blood Count in Abdominal Disease.—Longridge can not regard leucocytosis as an infallible indication of the presence of pus, but as an indication of toxemia its value appears to be very great. An increasing leucocytosis is, other things being equal, the most scientific means at our disposal for gauging the increasing virulence of an appendicular affection and a decreasing leucocytosis is evidence of decreasing virulence or walling off of the toxic products.

10. Intestinal Anastomosis.—Bishop describes a new bone bobbin, which he thinks has the advantages of the Jessett and Allingham bobbins, which, together, meet most of the indications required, simplicity, durability and absorbability, properly uniting the gut, facilitating and protecting suture, etc. He gives figures of the forms for end to end, side anastomosis and pylorotomy, and reports cases of its use.

12. Paraffin Prothesis.—A number of cases are reported by Downie, who finds it valuable and promising in its results. He classifies the failures in this operation to be due as follows:

1. To insufficient antiseptic precautions. 2. To the want of suitable apparatus. 3. To the injection of an excessive quantity of paraffin. 4. To insufficient digital pressure around the nose while the paraffin is being injected. The first two causes are apt to result in local inflammatory mischief, while the two latter favor the escape of the paraffin into the loose cellular tissue in the near neighborhood of the nose.

13. Femoral Hernia.—The operation recommended by Nicoll consists of two parts; 1. Obliteration of the sac, the steps of which are: 1. Exposure of the sac; 2, opening it longitudinally in its middle line and clearing it of contents; 3, separating it from the parts surrounding its neck, including the transversalis and iliac fascia for one inch round the abdominal aspect of the ring; 4, bisecting the sac longitudinally from the fundus

to the neck; 5, making an aperture in one-half near the neck; 6, interlocking the halves by putting the other through the aperture. In some cases it lies better if previously twisted one-half turn on its longitudinal axis; 7, reducing the whole sac through the femoral ring into the extraperitoneal space previously cleared for it by detaching its neck from the abdominal aspect of the ring. The sac thus lies bunched up within the abdomen, between the peritoneum and the transversalis and iliac fasciæ over the internal aperture of the femoral canal. II. Closure of the femoral ring consists in: 1. Carrying an incision (bone deep) from the femoral vein along the pubic ramus to the region of the pubic spine, dividing the pubic portion of the fascia lata and the origin of the pectineus, and the periosteum. Its length will depend on the extent to which the femoral vein has been displaced outward by the presence of the hernia, and will vary from 1 to 1½ inches. 2. Detach the periosteum to a limited extent and retract it. 3. Drill the bone in its upper edge in two places, one half to one inch apart. 4. Pass through one of the apertures a loop of stout catgut or other absorbable ligature. 5. Divide the loop of ligature. Thread one end in a large curved surgical needle and pass it as a mattress suture through Poupart's ligament. Unthread it from the needle. Repeat this with the second end, carrying it through Poupart's ligament at a higher level, avoiding the deep epigastric artery to the outer side, and, in the male patients, the spermatic cord above. In very large hernias the loops may be made to diverge in the ligatures so as to gather in the margin of the aperture. 6. By a probe, into the eye of which the ends are threaded, withdraw both through the second drill-hole of the bone. 7. Tie the ends of each loop separately over the front of the bone, thus bringing Poupart's ligament down to the posterior surface of the bone, and then fixing it firmly in contact with that surface, thus making an extension practically of Gimbernat's ligament. 8. To more fully secure a closure, unite, by interrupted catgut sutures, the detached margin of the pectineal origin and the pubic portion of the fascia lata to the anchored Poupart's ligament. He asserts that this method has advantages over the Roux method in that it avoids the introduction of any metal body, and in other respects.

14. Rodent Ulcer.—McFeely treats rodent ulcer with formalin under local or general anesthesia, if it is not very large or easily accessible. Two or three applications seem necessary. Later he uses formalin glycerin 30 to 50 per cent., with or without tannin. In long standing cases liable to involve bone or extensively destroy tissue he prefers to first curette away the diseased tissue, apply hemostatic and then apply the formalin, all under anesthesia. The formalin should not be allowed to evaporate. The blackish slough should be allowed to separate spontaneously or may be assisted by some unirritating ointment. He speaks highly of the results of this treatment.

17. Constipation.—Goodhart gives his ideas of the mechanism of constipation, which is often credited to obstruction in the stomach and bowel. He thinks it is more likely of reflex or paralytic nature, due to the lack of peristaltic action over a certain region and that the annular stricture is less likely to bring about this condition. He is rather conservative in treatment. Bowels are made for man, not man for the bowels, and there are great individual differences in persons. He has been struck with the fact that of all those that suffer from constipation, very few give signs of retention, and he thinks the trouble is largely with the men, that they eat too much, and with women that they eat too little. As regards mucocolitis, he thinks colostomy would be a very bad practice, even in extreme cases. Clearing out the colon is not always necessary, as it has a certain digestive function of its own for food. He is rather inclined to think the condition is not really a colitis, but rather a nervous trouble in many cases. He is also skeptical as regards flatulent colic, which is often due to other causes. He also questions the theory of auto-intoxication from the intestines. We should be cautious how we charge septicity to such masters in natural asepis as are the stomach and colon.

18. Cardiac Pain.—This second lecture by Morison gives a classification of the forms of angina pectoris, classifying them

in two groups, one with pain and one without. The first type he notices in his article is the musculo-spasmodic, which he thinks may be possible, and that the quantity of blood supplied may have less to do with the trouble than the chemical changes in the muscle itself. He also notices the coronary, aneurismal, aortitic and coronary occlusive-angina as admissible types, though he does not give the exclusive importance to any of them that is credited by some. As regards aortitic aneurism he takes issue with Huchard's views. He also mentions here both intravascular and extravascular neuritic causes, the latter in the disease of the spinal cord and other portions of the nervous system as in tabes. He admits that a purely neuralgic angina is possible, and is a preferable designation to "false" or "pseudo" angina.

22. Kala-Azar.—Rogers has investigated the serum reaction of kala-azar and finds it impossible to accept the view of certain others that it is identical with Malta fever. It is in his opinion a form of malarial fever, and in this he is supported by Ross from an independent investigation in Assam.

23.—Price takes the same view.

27. Mosquitoes.—Aitken gives a brief report of his experience with mosquitoes in the North Canara District of India and notes that the anopheles can not thrive in absolutely stagnant water like the culex. He thinks possibly because it favors the infusorian parasite to which they succumb so readily. He notices that they may also be found in pools, in newly broken ground, thus favoring the old theory that breaking up ground favors malaria.

28. Mycoids.—In a former number of the *Journal of Tropical Medicine*, Dr. W. L. Braddon describes a new organism as the most frequent hematozoon to be met with in the Malay peninsula, to which he gave the term "mycoid." Clarke has gone over the subject, examined for these organisms and finds that they occur in almost every examination, including those of perfectly healthy persons, and are not affected by quinin. He thinks it is a purely physiologic phenomenon and not a parasite or a pathologic organism.

30. Transmission of Tuberculosis from Man to Cattle.—Reviewed in THE JOURNAL of November 8, p. 1219.

32. Croupous Fibrinous Rhinitis.—Moeller reviews 74 communications that have been published on this subject, including Major's as early as 1885, and other American cases. He describes the clinical picture as consisting essentially of pseudo-membranes developing in the nose without previous or consecutive diphtheria or any operative intervention on the parts. It is an acute affection, and commences with a watery discharge and increasing obstruction of the nose until it is completely closed by the membranes. Nearly every patient on record was a child. The course is generally mild, not accompanied by general symptoms, and there does not seem to be any tendency on the part of the membranes to spread beyond the nasal cavities. It may be caused by various bacteria in conjunction with some injury of the nasal membranes, but is generally the work of the diphtheria bacillus. Occasionally it has shown itself to be contagious. In one of the two personal cases described, diphtheria bacilli were cultivated from the pseudo-membranes, and in the other the pneumococcus. Treatment was restricted to removal of the pseudo-membranes and local application of boric acid.

37. Improved Writing Apparatus for the Blind.—The small portable apparatus invented by Dussaud writes the alphabet from left to right and on the side of the paper on which it is to be read, thus obviating the necessity of turning the paper over. Instead of a punch the writing is done with a small frame containing six keys, like those of a typewriter, which allow all the combinations possible of the alphabet used by the blind, and raise the letters in relief.

43. New Kind of Diphtheria Serum.—Diphtheria antitoxin acts exclusively on the toxins, but Wassermann has succeeded in producing a specific serum which dissolves diphtheria bacilli and causes both agglutination and precipitation. He suggests that it might be possible to combine this new serum with the specific antitoxin, and thus enhance the benefits of the

latter. The combination might prove peculiarly effective in convalescence from diphtheria or in cases in which the bacilli lurk in the throats of healthy persons. He mixes 20 c.c. of a 1 per cent. solution of ethylene diamine with 1 gm. of the bacilli thoroughly dried, killed and ground in a mortar. After the mixture has been shaken up together for several hours it is allowed to settle for twenty-four hours and then filtered. The toxins contained in the clear fluid that filters out are neutralized with diphtheria antitoxin, and it is then injected into animals. Rabbits have been used thus far in the experimentation.

45. Acute Syphilitic Nephritis.—A case is described in detail, observed at Ebstein's clinic, which confirms the experience of Dieulafoy, Hoffmann and others that acute nephritis may occur as one of the very earliest manifestations of syphilitic infection. The onset was severe, and in 3 cases on record it terminated fatally, but it is possible that a syphilitic nephritis may run an insidious and unrecognized course. In his case the specific infection was three weeks old, and edema, ascites and hydrothorax followed the appearance of condylomata and a painful throat affection. The urine was scanty, contained much albumin and numerous hyaline and granular casts. The patient was a robust working man, 31 years old, but the symptoms described had made him keep his bed for a week. He was rubbed daily with 5 gm. of gray ointment, and all the kidney symptoms, ascites, edema, etc., rapidly disappeared; the albumin in the urine dropped from 13.5 to 1.6 gm. in two weeks. The urine was normal when finally dismissed after seven weeks of treatment. The other manifestations of the syphilitic infection did not respond so promptly and effectively to the specific treatment as the nephritis. Karvonen has observed cases permanently cured for eight to thirteen years, but in Hoffmann's patient the nephritis recurred later.

47. Typhoid Bacilli in Sputa.—In the case first described the patient had succumbed to a fibrinous pneumonia associated with typhoid fever. Pneumococci were found numerous in the lung at the autopsy, and with them a few typhoid bacilli. The latter had probably been occasionally present in the sputa during life. In a second case a young man in the fourth week of a severe typhoid fever, as convalescence was approaching, suddenly exhibited severe symptoms on the part of the lungs, dyspnea, cyanosis and pulse rising from 80 to 120, with pain in the right side and marked increase in temperature. The sputum was foamy and streaked with blood. The heart action was so weak that stimulants were necessary. These symptoms gradually subsided in the course of six days, and the area of dullness which had developed suddenly, also vanished, and the sputa were no longer blood streaked. A serous effusion developed in the right pleura, but was gradually absorbed and convalescence progressed undisturbed. The sputa contained large numbers of typhoid bacilli for fourteen days, and a few pneumococci. Only a few cases have been published in which these bacilli were isolated from the sputa, and none in which a primary pneumo-typhoid developed in consequence of inhalation of bacilli in the dust of such sputa. It is very probable, however, that such dust alighting on articles of food may be the cause of abdominal typhoid. The sputa of Dieudonné's patient contained numerous typhoid bacilli for seven weeks, long after he had apparently recovered. The hemorrhagic character of the sputa was mentioned in every similar case on record. This hemorrhagic character may be due to an infarct in the lungs as well as to a pneumonia. In this case typhoid bacilli in the blood might get into the alveoles and be coughed up in the sputa. In a third case described a bacteriologist who had been working with extremely virulent typhoid cultures developed typhoid fever. In the third week he complained of pains in the lungs and an area of dullness developed on both sides with increasing fever. The sputa were viscous bright red balls; no typhoid bacilli could be found in them. An exploratory puncture on the thirtieth day revealed a serous, slightly hemorrhagic effusion in the pleura, which contained typhoid bacilli in large quantities. About 50 c.c. of the purulent effusion was removed the fifty-second day, after which the temperature dropped to normal. There had been no exper

toration for some time, when the sixty-fourth day the patient coughed up a quantity of slightly hemorrhagic sputa. Exploratory puncture the eighty-fourth day failed to disclose further effusion, and the area of dulness observed was ascribed to a fibrinous pleuritis, but two days later, after dismissal, violent coughing occurred as the patient was ascending the stairs, and he coughed up about 200 c.c. of pus. Pure cultures of virulent typhoid bacilli were derived from the pus of the pleural empyema in this case. In a fourth the autopsy disclosed a hemorrhagic infarct in the lungs from which pure cultures of the pyocyaneus were derived. Death had occurred the twenty-sixth day of a severe typhoid fever, exhibiting the last two days hemorrhagic sputa with dulness and crepitus in the lungs. Mixed infection in the course of typhoid fever is a more serious condition than a pneumonia caused by the typhoid bacillus alone, as a second infection is superposed. It is still a question whether the typhoid bacillus alone is able to induce a lobular pneumonia, although Jehle has reported five cases in which he succeeded in isolating the typhoid bacilli, once in a pure culture, and once after influenza, associated with diplococci and staphylococci.

48. Suggestions for Early Diagnosis of Cancer.—Boas urges the general distribution of circulars warning against cancer, similar to the one recently issued by the Belgian government in its prophylaxis against venereal diseases. He thinks that if the public generally were instructed in the early symptoms of cancer, persons affected would apply to a physician at the first indications, instead of wasting time on treatment of supposed stomach troubles, hemorrhoids, etc. He states that of the 54 cases of cancer of the rectum in his experience since 1896, 80 per cent. were already inoperable when first seen. The carcinoma had not been diagnosed in the overwhelming majority, although in many instances there had been digital exploration of the region. He further urges that in all cases suspicious of cancer the patient should be admitted to a hospital and kept under observation for one to three weeks, returning for a second investigation if the result of the first had been dubious. Besides the benefit to the public from such measures, students and physicians would acquire valuable training in the early recognition of cancer.

53. Statistics of Tertiary Syphilis.—Weber's article is the result of five years' study of syphilis at Jadassohn's clinic at Berne, and supplements the latter's communication in regard to tertiary syphilis among the prostitutes of Breslau. The figures show that tertiary manifestations occasionally develop even after several courses of thorough mercurial treatment. Weber tabulates the statistics of 185 cases of tertiary syphilis in the clinic, and of 49 in private practice. No treatment had been applied in 77.3 per cent. of the former nor in 40.8 per cent. of the latter. Applying the principle followed in the Breslau statistics he collated all the cases of syphilis at any stage and found that 51, or 34.7 per cent., of 147 private patients who had been insufficiently treated or not at all, presented tertiary symptoms, while only 13, or 5 per cent., exhibited them out of 261 who had taken more than one course of treatment. There was thus a difference of 29.7 per cent. between the two groups. This difference amounted to 54.6 in those who had been under observation for more than one year, and to 58.5 per cent. in those under observation for two years and more. He groups his material in various ways, and the result is always in favor of thorough treatment as materially reducing the tendency to tertiary manifestations later. The cases of recurrence of tertiary accidents also showed that a third of the patients had not been treated for their primary affection. Also that those treated with iodid alone were in the majority.

56. Symptomatic Treatment of Tuberculosis.—In this review of his experiences as director of the great sanatorium at Alland, Weismayr mentions that he has frequently conquered the night sweats by ordering a harder bed, lighter night clothes and keeping the room cool, with open windows. A cold sponge may prove effective, especially when vinegar is used. Brehmer used to recommend as a sovereign remedy a glass of milk with two teaspoonfuls of brandy on retiring. Formalin and tannin are the most effective external measures. The patient is

swabbed with a mixture of equal parts of 40 per cent. formalin and alcohol, the first evening on the back and arms, the second on the legs, the third on the front of the trunk. The result is prompt, enduring and free from by-effects. Dohrn applies the formalin in a soap which is allowed to dry on. Weismayr has found the salvia preparations useful in cases of night sweats, giving 20 drops of the tincture in the morning and 30 at night. Lead acetate is still more effective. He prescribes it in the formula: .03 gm. plumb. acetic.; morphin. hydrochlor.. .005 gm., and sacchar., .3 gm., in two doses during the evening. In case of vomiting he has the patient eat oftener and smaller amounts and recline afterward, taking iced soda water. He has also seen good results follow the administration of 5 to 10 drops of tincture of iodine with .1 gm. of potassium iodid in water during the day, to correct digestive disturbances. A tendency to constipation will frequently yield to a glass of cold water before breakfast, supplemented by stewed fruits, sour milk or one-day kefir. The fever will generally subside on enforced repose, but if not, it is important to reduce it at meal times by medicinal means. Also in the cases that are free from temperature in bed but acquire it as soon as the patient gets up. He prefers pyramidon for the purpose: .25 gm. dissolved in half a glass of water, and slowly sipped in the course of a half hour before the anticipated rise in temperature. The fever is checked by this measure in every case, almost without exception, and sweating rarely follows, while no untoward effects were observed. Kobert attributes to pyramidon a stimulating action on the heart. He warns against allowing patients to become hypochondriac on the subject of temperature measurements. It is better to abandon the thermometer.

57. Pyoktanin in Eye Affections and Chancroids.—It is twelve years since Stilling proclaimed the merits of pyoktanin as a powerful antiseptic, free from toxic and caustic properties, while, contrary to other antiseptics, it does not coagulate albumin. Physicians have been slow to take advantage of it, but in veterinary circles it is being used more and more extensively every year. It is indispensable that the pyoktanin should come into intimate contact with the tissues, and consequently it must be applied in the form of a powder or very strong solution. A weak solution is absorbed by the dressing, and the tissues do not feel its effects. Weill has been using it for ten years in eye affections, and states that the cornea and conjunctiva bear well a 1/100 solution or powder. He has also found it more effective than any other remedy for the treatment of chancreoid when it can not be excised. He applies it pure in the form of a powder after curetting, and repeats daily or at brief intervals, removing the scabs that form until they are not easily detachable. When the firm scab at last drops off, the surface beneath is covered with healthy granulations, which do not stain blue with the pyoktanin. Four or five months may be necessary to complete the cure. The blue discoloration is the only drawback to this remedy.

59. Treatment of Affections of Testicles and Adnexa on New Principles.—Zabludowski has charge of the Berlin University Massage Institute and has found that many cases of inflammation and disturbances in the testicles and their adnexa can be cured by scientific stimulation of the nerves and circulation in the parts. His method of treatment includes massage manipulations, kneading and intermittent compression of the parts to diffuse and hasten the absorption of infiltrates and exudates; milking movements and stretching to cure thickening and shortening of the seminal cord, and twisting to detach adherences, but the principal factor in treatment is to induce rapid and violent changes in the circulation by means of repeated constriction with an elastic rubber band or tube 8 mm. wide and about 160 cm. long, which is wound around the roots of the penis and scrotum and left for fifteen to twenty minutes. By this time the venous congestion is intense, and when the compression is removed the arterial blood streams copiously through the parts. He describes the technic of the various manipulations, which must be graduated not to cause pain nor excitement. The indications for this very effective treatment are protracted inflammation of the testicles, epididymis and seminal cord of traumatic or gonorrheal origin, after the acute

stage has passed. Also functional disturbances with or without slight anatomic alterations; acquired or slight congenital shortness of the cord; atrophy *ex inactivitate*; sensory or motor disturbances and pathologic secretion. The sittings are repeated daily for ten to twenty minutes and continued two to eight weeks. The most rebellious cases are usually those that have been treated with cold applications at some previous stage. His experience has been extensive, and he advocated this method of treatment, with details of cases at the recent Naturforscher Congress.

61. Changes in Visual Field in Syphilis.—Ziemssen calls attention to the fact that a syphilitic affection of the brain or spinal cord is often associated with an affection of the optic nerve, limiting the field for red and green, even when the general visual field is unimpaired. The course of the main affection can be traced by inspection of the visual field as the conditions improve or grow worse, and it is thus a criterion of the benefits from treatment. In some of his patients the improvement was marked under mercury, but as soon as it was suspended the visual field gave evidence of retrogression. The more intense the treatment and the longer it was continued, the better the results in the visual field.

63. Sahli's Test of Stomach Functions.—Sahli's "flour soup" test was described in THE JOURNAL of May 31, 1902. Bönninger has been giving it a thorough trial and says that research in this line will aid in solving certain hitherto obscure problems, but that in the clinic, as a general rule, the older methods still hold their own in comparison.

64. Excision of Nomatous Gangrene.—Ranke illustrates a case of extensive noma of the genitalia and buttocks which developed during measles in a girl 3 years old. He treated it by prompt excision of all the diseased portions, as in three previous similar cases. All the patients made a smooth recovery. During the fifty-eight days spent in the hospital the child increased 22 per cent. in weight, a daily gain of 57 gm., about 2 ounces. In the other cases he supplemented excision with thermocauterization.

65. Ovariectomy During Pregnancy.—Graefe adds 27 cases, including 3 in his own experience, to the 148 on record of ovariectomy undertaken during pregnancy. The mortality of the mothers in the entire list was 2.3 per cent. One of the deaths occurred three months after the intervention, which could scarcely be incriminated in this case, and one death was inevitable, as extensive gangrene was found on operating. The last 126 operations contain only this one fatality. In 119 cases the pregnancy was interrupted by the intervention in only 19, or 16 per cent. In the last series of 27, abortion followed in 5 and premature delivery in 3. This series includes the American cases of Jarman and Kahn. The pregnancy continued undisturbed in two cases with numerous adhesions or torsion of the pedicle of the tumor. In the cases in which abortion occurred there must have been some predisposition to it, possibly from decidual endometritis as the trauma of the intervention was slight. Abortion would probably have occurred even without the operation. The statistics show that ovarian tumors, during a pregnancy, induce abortion in 17 per cent. if left unoperated. After ovariectomy the pregnancy was interrupted in only 22.5 per cent., and a third of this number presented urgent indications for surgical relief. The results of expectant treatment have been a maternal mortality of 39.2 per cent. and a fetal of 67 per cent., according to Orgler's and Winckel's statistics. Six of the cases in the series demonstrate that even after evidences of impending abortion have appeared, prompt ovariectomy will afford relief, and the pregnancy will continue its course uninterfered with.

66. Suture of Bladder After the High Operation.—Hofmann recommends his practice of keeping the patient in bed and curing the cystitis before attempting to operate for the removal of a foreign body in the bladder. The time thus spent shortens the after-treatment, as the inflammation once cured, the incision in the bladder can be made without fear, and it is sure to heal smoothly after immediate suture.

68. Review of 720 Gallstone Operations.—Kehr's total mortality has been 15.5 per cent., and excluding the compli-

cated cases requiring additional interventions on stomach or liver, carcinoma, etc., the mortality during the first hundred days after the operation was 3.5 per cent. He has been able to save a number of cases of diffuse cholangitis with putrid pus in the bile duct and liver. The patients would inevitably have succumbed without intervention, and if it is possible to save thus 3 per cent. of these apparently inoperable cases, it is the surgeon's duty to act. He can not be sure of the diagnosis before operating. Kehr has had only one case of peritoneal sepsis in his last 300 gallstone laparotomies. He finds that elderly persons bear the operation surprisingly well. His experience has also shown that a chronic interstitial pancreatitis is liable to cause the same clinical picture, cachexia, icterus, etc., as a carcinoma in the pancreas. An operation, however, may save the patient in the former case. He is impressed more and more with the advantages of draining the hepatic duct. He has done it 49 times in cystectomies, 6 times with cystostomy, 29 times with cystectomy and cysticotomy, and 6 times alone. He has been draining the hepaticus for six years, and has found that the loss of bile had no serious effect on the digestion, although in some cases all the bile was thus drained away for two weeks, a loss of 500 to 800 gm. of bile a day. The only symptoms resulting were the moderately lessened appetite and somewhat difficult defecation. He inserts a tube the size of the little finger, after the bile duct has been opened above the duodenum and all the accessible stones removed. The tube is introduced for a distance of 4 cm. Unless certain that the bile duct is completely free from stones, he inserts a second tube in this duct also. This favors later irrigation of the duct and removal of stones overlooked at first. He advocates this drainage of the hepatic duct after ectomy as the rational method of treating chronic recurring cholelithiasis. The mortality is less than after choledochotomy with suture as the operation is more rapidly concluded, and infection in the hepatic duct can be more easily cured. The surgeon is far less liable to overlook stones, as they are frequently discovered in the after-treatment. In one case a stone was thus found too large to be extracted. A laminaria was inserted liverward through the incision in the bile duct, and the hepatic dilated by this means until the stone could be easily extracted twelve hours later. The swelling of the laminaria was extremely painful to the patient, but it accomplished its purpose. He has never witnessed any untoward effects from this hepatic drainage. The flow of bile usually ceases by the third week and the wound heals by the sixth. He has never observed a case of actual recurrence of stones after they have been completely evacuated, but thinks it is possible with a fresh infection of the biliary passages.

69. Clinical Importance of Indicanuria.—The results of examination of 40 patients with gastrointestinal affections and a large number of others with leukemia or anemia, Addison's disease, Bright's disease or affections of the liver or spleen are tabulated for comparison. They demonstrate beyond question that besides the indican derived from excessive intestinal putrefaction, there is another source for the indican in the urine, namely, in altered metabolism. Indicanuria is a constant symptom that aids in the diagnosis of insufficiency of the liver. It is also an important symptom in splenopathy of infectious origin.

70. Hematology of Chloroform Narcosis.—Solimei concludes from his extensive research that it is possible to determine the prognosis of a chloroform narcosis by examination of the blood, and also whether all the anesthetic has been eliminated from the system. The influence of the chloroform lasts from a few hours to several days in different individuals, and the changes it induces in the blood are in direct proportion to the amount of the anesthetic used. They are not all due to the chloroform but form a vicious circle. In tests on animals the blood had a strong odor of chloroform and coagulation occurred unusually slowly. The number of red corpuscles diminished, the decrease manifest even as late as forty-eight hours, while the proportion of whites increased. The spectrum of the arterial blood was characteristic of methemoglobin if the narcosis had been deep or protracted. The blood cells also

became altered in shape to a certain extent. The proportion of oxygen in the blood diminished while that of carbon dioxide increased. The deleterious action of chloroform is more marked on the venous than on the arterial blood.

71. Treatment of Lupus with Formalin.—Matteucci first curettes and removes all suspicious tissue, under cocaine or chloroform, and six days later applies a compress impregnated with a 10 per cent. glycerin solution of 40 per cent. formaldehyde, preceded by a little cocaine. The compress is left in place twenty-four hours and then renewed day after day. In two weeks a pink zone of healthy tissue replaces the lupus patches. Three years' experience has convinced him of the great advantages of this method of treating lupus. It is especially useful when the mucosa is involved, and it may be supplemented by Thiersch or Lang flaps. Dusting powders should be avoided, as they interfere with the action of the formalin. He has also applied it in a few cases of epithelioma with good results.

73. Scoliosis of Sciatica.—Cappuccio has observed Vanzetti's sign of scoliosis in six patients, and notes that the pelvis in sciatica is invariably held horizontal, while in other lesions of this region it is more or less inclined. This horizontal attitude of the pelvis in spite of the marked scoliosis is a valuable differentiating sign for sciatica. It is easy to understand the mechanism of the scoliosis, as the effort is to spare the inflamed nerve trunk, while in hip-joint disease the attitude is the result of the effort to spare the joint. His cases are illustrated.

75. Medicated Steam for Affections of Upper Air-Passages.—Della Vedova has been using for some time in the treatment of catarrhal affections of the upper air-passages an apparatus which sprays them with a medicated steam. The heat, the steam under pressure and the medicinal substance combine to affect the mucosa favorably, and his experience has been remarkably encouraging in regard to the value of this "rhinovaporization," as he calls it. He has found that certain mineral waters were peculiarly adapted for spraying in steam by this means, Salsomaggiore and Salice waters in particular.

79. Trendelenburg's Method of Treating Varices.—Ronchi has collected 655 cases of varices treated by 26 various surgeons with the Trendelenburg method of ligating the saphena. He adds that 29 out of 69 cases in his own experience were operated on, and by this method. The results demonstrate, he thinks, that this method of treatment, alone or combined with excision of the largest varices, is to be preferred to all other methods of intervention.

80. Steam Treatment of Carbuncle.—Gucciardello gives a cut of a little instrument he had invented for the purpose of applying a medicated spray to a carbuncle or similar lesion. The steam is generated in a small vessel, and emerges through four parallel and tapering tubes, which issue horizontally from the top of the vessel. The tips of the tubes form a square that includes the center of the lesion. He uses a 2 per cent. solution of carbolic acid for generating the steam. It is applied three or four or even more times a day, for a half to one hour each time, just avoiding scorching the tissues. Between the applications a compress wet with a solution of sublimate is applied. In four to nine days at farthest the necrotic portions are eliminated and the lesion heals from beneath with no loss of substance from the knife or cautery. He describes 7 cases thus treated with the best results. The application is not painful and recovery is prompt.

87. Lecithin in Therapeutics.—Seroni regards the subcutaneous injection of lecithin as an extremely effective means of sustaining and increasing the vitality, as it provides a substance urgently needed by the organism in certain conditions. Lecithin derived from brain substance is liable to contain toxic neurins, ptomaines, etc., consequently he prefers the whites of fresh eggs for the purpose. They contain fully 10 per cent. of lecithin. He injects it in emulsion in physiologic salt solution, in a dose of 20 to 30 eg. a day or even more.

90. Closure of Defect in Gall Bladder.—Baldassari has experimented on dogs and found that perforations and lacerations of the gall bladder can be advantageously closed by a

sacro-muscular flap from the abdominal wall. The striped muscular layer turned inward forms a strong wall for the gall bladder, and the layer of peritoneum outside blends with the peritoneum investing the organ. The conditions were found extremely satisfactory when the animals were killed later, and indicate that this method of treating such defects is very promising.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE MEDICAL NEWS VISITING LIST FOR 1903. Weekly (Dated, for 30 Patients); Monthly (Undated, for 120 Patients Per Month); Perpetual (Undated, for 30 Patients Weekly Per Year); and Perpetual (Undated, for 60 Patients Weekly Per Year). The First Three Styles contain 32 Pages of Data and 160 Pages of Blanks. The 60-Patient Perpetual Consists of 256 Pages of Blanks. Each Style in One Wallet-Shaped Book, with Pocket, Pencil and Rubber. Seal Grain Leather, \$1.25. Thumb-Letter Index, 25 Cents Extra. Philadelphia and New York: Lea Brothers & Co.

HUMAN ANATOMY. A Complete Systematic Treatise by Various Authors, Including a Special Section on Surgical and Topographical Anatomy. Edited by Henry Morris, M.A., and M.B. Lond., F.R.C.S. Eng., Member of the Council (Late Vice-President) of the Royal College of Surgeons of England. Illustrated by 846 Wood Cuts, the Greater Part of Which are Original and Made Expressly for This Work by Special Artists, 266 Printed in Colors. Third Edition, Revised and Enlarged. Cloth. Pp. 1328. Price, \$6.00. Philadelphia: P. Blakiston's Son & Co. 1902.

THE WORK OF THE DIGESTIVE GLANDS. Lectures by Professor J. P. Pawlow, Director of the Physiological Department of the Institute for Experimental Medicine. Translated into English by W. H. Thompson, M.D., M.Ch., F.R.C.S. (Eng.), King's Professor of the Institute of Medicine, Trinity College, Dublin. Illustrated. Cloth. Pp. 196. Price, \$2.00. London: Charles Griffin & Co., Ltd. Philadelphia: J. B. Lippincott Co. 1902.

A TREATISE ON DISEASES OF THE EYE, NOSE, THROAT AND EAR. For Students and Practitioners. By Various Authors. Edited by William Campbell Posey, A.B., M.D., Professor of Ophthalmology in the Philadelphia Polyclinic, and Jonathan Wright, M.D., Attending Laryngologist to Kings County Hospital. Illustrated with 650 Engravings and 35 Plates in Colors and Monochrome. Cloth. Pp. 1238. Price, \$7.00. Philadelphia and New York: Lea Brothers & Co. 1903.

NOETHAGEL'S PRACTICE OF MEDICINE: American Edition. Diseases of the Bronchi. By Dr. F. A. Hoffmann, of Leipzig. Diseases of the Pleura. By Dr. O. Rosenbach, of Berlin. Pneumonia. By Dr. F. Aufrecht, of Magdeburg. Edited with Additions, by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania. Seven Full-Page Colored Lithographic Plates. Pp. 1030. Cloth. Price, \$5.00 net. Philadelphia and London: W. B. Saunders & Co. 1902.

THE AMERICAN TEXT-BOOK OF OBSTETRICS. In Two Volumes. Edited by Richard C. Norris, M.D.; Art Editor, Robert L. Dickinson, M.D. Second Edition, Thoroughly Revised and Enlarged. Vols. I and II. Cloth. Pp. 547 and 554 respectively. Colored and Half-tone Plates. Price, Per Set, \$7.00. Philadelphia and London: W. B. Saunders & Co. 1902.

A TEXT-BOOK OF THE DISEASES OF THE EAR. For Students and Practitioners. By Professor Dr. Adam Politzer, of Vienna. Translated at the Personal Request of the Author, and Edited by Milton J. Ballin, Ph.B., M.D., and Clarence L. Heller, M.D. Fourth Edition, Revised and Enlarged, with 346 Original Illustrations. Cloth. Pp. 884. Price, \$7.50. Philadelphia and New York: Lea Brothers & Co. 1903.

TEXT-BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By John J. Reese, M.D., Late Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania. Sixth Edition. Revised by Henry Leffmann, A.M., M.D., Professor of Chemistry and Toxicology in the Woman's Medical College of Pennsylvania. Cloth. Pp. 660. Price, \$3.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

DISEASES OF THE PANCREAS AND THEIR SURGICAL TREATMENT. By A. W. Mayo Robson, F.R.C.S., Senior Surgeon, Leeds General Infirmary; and B. G. A. Moynihan, M.S. (Lond.), F.R.C.S., Assistant-Surgeon, Leeds General Infirmary. 293 Pages, illustrated. Cloth. Pp. 293. Price, \$3.00 net. Philadelphia and London: W. B. Saunders & Co. 1902.

CLINICAL SURGERY for the Instruction of Practitioners and Students of Surgery. By A. J. Ochsner, B.S., F.R.M.S., M.D., Chicago, Surgeon-in-Chief, Augustana Hospital and St. Mary's Hospital. Pp. 481. Price, Cloth, \$6.00; Leather, \$7.00. Chicago: Cleveland Press (The Clinical Review Publishing Co.).

BACTERIOLOGICAL TECHNIQUE. A Laboratory Guide for the Medical, Dental, and Technical Student. By J. W. H. Eyre, M.D., F.R.S. Edin., Bacteriologist to Guy's Hospital. With 170 Illustrations. Cloth. Pp. 375. Price, \$2.50 net. Philadelphia and London: W. B. Saunders & Co. 1902.

MEMORANDA ON POISONS. By Thomas Hawkes Tanner, M.D., F.L.S. Ninth Revised Edition, by Henry Leffmann, A.M., M.D., Professor of Chemistry in the Woman's Medical College of Pennsylvania. Cloth. Pp. 177. Price, \$0.75. Philadelphia: P. Blakiston's Son & Co. 1902.

THE PHYSICIAN'S POCKET ACCOUNT BOOK, Consisting of a Manila-Bound Book of 208 Pages and a Leather Case. By J. J. Taylor, M.D. Price, \$1.00 Complete. Subsequent Books to Fill the Case 40 Cents Each, or 3 for \$1.00. Philadelphia: Published by The Medical Council.

SPECTACLES AND EYEGLASSES: Their Forms, Mounting and Proper Adjustment. By R. J. Phillips, M.D., Ophthalmologist, Presbyterian Orphanage. Third Edition, Revised with 52 illustrations. Cloth. Pp. 109. Price, \$1.00. Philadelphia: P. Blakiston's Son & Co. 1902.

THE DEVELOPMENT OF THE HUMAN BODY. A Manual of Human Embryology. By J. Playfair McMurrich, A.M., Ph.D., Professor of Anatomy in the University of Michigan. With 270 illustrations. Cloth. Pp. 527. Price, \$3.00. Philadelphia: P. Blakiston's Son & Co. 1902.

THE STORY OF A LIVING TEMPLE. A Study of the Human Body. By Frederick M. Rossiter, B.S., M.D., and Mary Henry Rossiter, A.M. Cloth. Pp. 348. Price, \$1.00 net. Chicago, New York and Toronto: Fleming H. Revell Co. 1902.

REPORT OF THE SURGEON-GENERAL U. S. NAVY, Chief of the Bureau of Medicine and Surgery to the Secretary of the Navy, 1902. Paper. Pp. 339. Washington: Government Printing Office. 1902.

STUDIES FROM THE DEPARTMENT OF PATHOLOGY OF THE COLLEGE OF PHYSICIANS AND SURGEONS, Columbia University, N. Y. Vol. VIII. For the Collegiate Year 1901-2. Paper.

TRANSACTIONS OF THE WEST VIRGINIA STATE MEDICAL ASSOCIATION. Instituted April 10, 1867. Paper. Wheeling: Daily Intelligencer Steam Job Press. 1902.

THE MEDICAL RECORD VISITING LIST OR PHYSICIANS' DIARY FOR 1903. New Revised Edition. Leather. Price, \$1.25. New York: Wm. Wood & Co. 1902.

EIGHTH ANNUAL REPORT OF THE CHICAGO BUREAU OF CHARITIES, for the Fiscal Year Ending May 31, 1902. Paper. Pp. 39.

TRANSACTIONS OF THE MEDICAL SOCIETY OF NEW JERSEY, 1902. Cloth. Pp. 291. Newark, N. J.: L. F. Hardham. 1902.

The Public Service.

Army Changes.

Movements of Medical Officers, U. S. Army, under orders from the office of the Adjutant-General, Washington, D. C., from Nov. 8 to 15, 1902, inclusive:

Arthur, Wm. H., major and surgeon, U. S. A., having arrived in San Francisco, will report to this city and report in person to the Surgeon-General of the Army for instructions.

Branch, Frederick D., captain and asst.-surgeon, U. S. V., is honorably discharged, to take effect Dec. 20, 1902, his services being no longer required.

Garlington, Joseph C., captain and asst.-surgeon, U. S. V., is honorably discharged, to take effect Nov. 30, 1902, his services being no longer required.

Heller, Joseph M., major and surgeon, U. S. V., is honorably discharged, to take effect Nov. 30, 1902, his services being no longer required.

Hoff, John Van R., lieutenant-colonel and deputy surgeon-general, U. S. A., is relieved from duty in the office of the Surgeon-General of the Army, to take effect Dec. 1, 1902, and will then proceed to Ft. Leavenworth, Kan., and report in person to the commanding officer of that post for duty.

Kemp, Jos. M., contract surgeon, U. S. A., will proceed from this city to San Francisco, and will report to the commanding general, Department of California, for transportation to the Philippine Islands.

The resignation of Arthur M. Line, first lieutenant and asst.-surgeon, U. S. A., of his commission as an officer of the Army has been accepted by the President, to take effect Dec. 1, 1902.

Lynch, Charles, major and surgeon, U. S. V., captain and asst.-surgeon, U. S. A., is honorably discharged from the service of the U. S. as major and surgeon, U. S. V., only, to take effect Dec. 15, 1902.

Lynch, Charles, major and surgeon, U. S. V., now at San Francisco, will proceed to Ft. Porter, N. Y., for duty.

Nicholson, John L., contract surgeon, U. S. A., is relieved from duty at Monterey, Cal., and will proceed to his home, Dorchester, Mass., and report to the Surgeon-General of the Army for annulment of contract.

Tweedle, Hedley V., contract surgeon, U. S. A., is relieved from duty at the General Hospital, San Francisco, and will proceed to Monterey, Cal., for duty.

Phillips, John L., major and surgeon, U. S. A., having reported his arrival in San Francisco, will report in person to Major-General Adna R. Chaffee, U. S. A., for special duty and to accompany him to his station and upon completion of this duty will report by letter to the Adjutant-General of the Army for further orders.

Shaw, Henry A., captain and asst.-surgeon, U. S. A., is granted leave of absence for ten days.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Nov. 15, 1902:

Medical Inspector J. R. Waggoner, detached from the Marine Recruiting Station, Boston, and ordered to the Navy Yard, Mare Island, Cal.

Surgeon J. W. Baker, retired, ordered to duty at the Naval and Marine Recruiting Stations, Boston.

Surgeon N. H. Drake, detached from the Navy Yard, Mare Island, Cal., and to continue duty on *Solacc*.

P. A. Surgeon J. M. Moore, detached from the *Indiana*, and ordered to the *Raleigh*, when commissioned.

Medical Director G. F. Winslow, detached from the Naval Recruiting Station, Boston, and to wait orders.

A. A. Surgeon H. Shaw, appointed asst.-surgeon from October 28.

P. A. Surgeon A. W. Dunbar, detached from the Navy Yard, Puget Sound, Wash., and ordered to the *Wyoming* when commissioned.

P. A. Surgeon A. R. Alfred, ordered to the Navy Yard, Puget Sound, Wash.

P. A. Surgeon E. J. Grow, detached from the Navy Yard, New York, and ordered to the *Marblehead*.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Nov. 13, 1902:

Assistant Surgeon-General H. D. Geddings, to proceed to Delaware Breakwater quarantine for special temporary duty.

Surgeon John Godfrey, granted leave of absence for one month from November 13.

Surgeon W. P. McIntosh, granted leave of absence for 3 days from November 27.

P. A. Surgeon G. M. Guiteras, to proceed to Reedy Island quarantine for temporary duty, relieving Asst.-Surgeon T. F. Richardson.

P. A. Surgeon J. H. Oakley, granted leave of absence for one day.

P. A. Surgeon H. W. Wickes, to proceed to Cleveland, Ohio, and assume temporary charge of the service during the absence on leave of P. A. Surgeon J. B. Greene.

P. A. Surgeon J. B. Greene, granted leave of absence for 15 days from November 22.

Asst.-Surgeon V. G. Helser, to proceed to Philadelphia and report to medical officer in command for special temporary duty.

Senior Pharmacist and Chemist W. F. Macdowell, relieved from temporary duty in Washington, D. C., and directed to proceed to New York, and report to Surgeon G. W. Stoner, Immigration Depot, for duty, relieving Senior Pharmacist and Acting Chemist A. M. Roehrig.

Senior Pharmacist and Acting Chemist A. M. Roehrig, on being relieved from duty at the Immigration Depot, New York, to proceed to Stapleton and report to medical officer in command for duty and assignment to quarters, relieving Senior Pharmacist Charles Miller.

Senior Pharmacist Charles Miller, on being relieved from duty at New York (Stapleton), to proceed to Pensacola, Fla., and report to the acting assistant-surgeon in charge of the Santa Rosa quarantine station for temporary duty.

BOARDS CONVENED.

Board convened at Washington, D. C., for the consideration of the Act of Congress approved July 1, 1902, entitled "An act to regulate the sale of viruses, serums, toxins and analogous products in the District of Columbia, to regulate interstate traffic in said articles, and for other purposes." Detail for the Board: Assistant Surgeon-General L. L. Williams, chairman; Assistant Surgeon-General H. D. Geddings; P. A. Surgeon M. J. Rosenau; Asst.-Surgeon B. S. Warren, recorder.

Board convened at the U. S. Marine Hospital, Chelsea, Mass., Nov. 17, 1902, for the physical examination of officers of the Revenue Cutter Service. Detail for the Board: Surgeon R. M. Woodward, chairman; Asst.-Surgeon W. K. Ward, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 15, 1902:

SMALLPOX—UNITED STATES.

California: San Francisco, Oct. 26-Nov. 2, 6 cases.
Colorado: Denver, Oct. 25-Nov. 1, 3 cases.
Florida: Jacksonville, Nov. 1-8, 1 case; Lamont, Oct. 18-Nov. 8, 4 cases; Mayport, Oct. 18-Nov. 8, 1 case; Pensacola, Oct. 18-Nov. 8, 1 case.
Illinois: Nov. 1-8, Chicago, 3 cases, 1 death; Freeport, 4 cases.
Indiana: Indianapolis, Nov. 1-8, 2 cases.
Kentucky: Lexington, Nov. 1-8, 13 cases.
Massachusetts: Nov. 1-8, Boston, 8 cases, 1 death; Cambridge, 1 case; Medford, 1 case.
Michigan: Detroit, Oct. 25-Nov. 8, 20 cases; Grand Rapids, Nov. 1-8, 4 cases.
Missouri: St. Louis, Nov. 2-9, 19 cases.
Nebraska: Omaha, Nov. 1-8, 1 case.
New Hampshire: Nov. 1-8, Manchester, 2 cases; Nashua, 20 cases.
New York: New York, Nov. 1-8, 4 cases, 1 death.
Ohio: Cincinnati, Oct. 31-Nov. 7, 4 cases; Cleveland, Nov. 1-8, 12 cases, 5 deaths; Hamilton, Nov. 1-8, 1 case; Toledo, Oct. 4 Nov. 8, 14 cases, 2 deaths; Warren, Oct. 25-Nov. 1, 1 case.
Pennsylvania: Nov. 1-8, Altoona, 1 case; Erie, 8 cases; Johnstown, 5 cases, 1 death; Philadelphia, 3 cases; Pittsburgh, Oct. 25 Nov. 8, 52 cases, 8 deaths.
South Dakota: Sioux Falls, Nov. 1-8, 1 case.
Utah: Salt Lake City, Nov. 1-8, 1 case.
Wisconsin: Milwaukee, Nov. 1-8, 20 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Oct. 18-25, 8 cases.
Belgium: Antwerp, Oct. 18-25, 1 case, 1 death.
Brazil: Bahia, Sept. 27-Oct. 18, 4 cases.
Chile: Pisagua, Oct. 13, 6 cases.
Ecuador: Guayaquil, Oct. 18-25, 3 deaths.
Great Britain: Bristol, Oct. 11-18, 1 death; London, Oct. 18-25, 1 case, 1 death; Manchester, Oct. 18-25, 1 case.
Russia: Oct. 11-18, Moscow, 3 cases; Odessa, 1 case.
Switzerland: Geneva, Oct. 11-18, 1 case.

YELLOW FEVER.

Colombia: Panama, Oct. 27-Nov. 3, 6 cases.
Costa Rica: Port Limon, Oct. 25-Nov. 1, 2 cases, 2 deaths.
Ecuador: Guayaquil, Oct. 18-25, 2 deaths.
Mexico: 24, 1 case, 1 death; Tampico, Oct. 26 Nov. 2, 5 Oct. 25-Nov. 1, 7 cases, 5 deaths.

CHOLERA—INSULAR.

Philippine Islands: Manila, Sept. 14-20, 49 cases, 36 deaths; Provinces, Sept. 13-20, 3,853 cases, 2,454 deaths.

CHOLERA—FOREIGN.

Egypt: July 12, 38,083 cases, 32,377 deaths; Oct. 25-Nov. 1, 225 cases, 22 deaths; Alexandria, Oct. 11-18, 58 cases, 55 deaths.
Japan: Kobe, Oct. 4-11, 49 cases, 22 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, Oct. 28, 1 case, 1 death.

PLAGUE—FOREIGN.

India: Karachi, Oct. 5-12, 13 cases, 8 deaths.
Russia: Odessa, Oct. 18-25, 45 cases, 16 deaths.

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Original Articles.

THE TREATMENT OF TUBERCULAR GLANDS OF THE NECK.*

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DENVER.

In Colorado everything pertaining to tuberculosis is of such importance that I have no hesitation in presenting this subject for your consideration, particularly as it has not been previously discussed in this society—so far as I am aware.

GENERAL CONSIDERATIONS.

The neck, as a whole, contains several hundred lymph glands, some of them superficial and some deep. Although their distribution is general, they exist principally in definite groups. Certain of these groups are particularly liable to tubercular disease, owing to their close connection with the entrance points of infection, such as the tonsils, teeth and pharynx. Chronic otitis, eczema of the scalp, ophthalmia, and various nasal troubles are also sources of infection, while in isolated instances germs may be deposited from the blood or ascend from the bronchial lymphatics.

It is a progressive disease, one gland sooner or later infecting others, a point of importance in selecting a rational form of treatment. The nodes most frequently affected are those in the submaxillary region and those lying along the internal jugular vein, in front of, behind and beneath the sterno-mastoid muscle. The submental and parotid regions are at times implicated, as well as the areas in the vicinity of the mastoid and above the clavicle. Towards the back of the neck infection is less frequent. The seriousness of tuberculosis of the cervical lymphatic system is generally underestimated. Chronic swellings in the neck are so common that they are not given the attention they deserve. To be sure, the danger is much less than in pulmonary affections, but, nevertheless, the enemy is there and prepared to invade some vital organ if opportunity arise. A considerable proportion of cases, from 10 to 25 per cent. according to Dowd, develop phthisis; while some die of meningitis or of general tuberculosis, and in others tubercular foci appear in various parts of the body. (A short time ago, for instance, I examined a boy of five with hip-joint disease closely following enlargement of the cervical lymphatic glands). To these dangers must be added the chances of repulsive deformity and unsightly scars.

Treatment is both general and local, the latter being divided into non-operative and operative.

GENERAL TREATMENT.

This is of the utmost importance, and is always indicated, sometimes for its curative effects in the early stages, but more frequently as a safeguard against relapse following an operation. It comprises both medicinal and hygienic measures.

Medicinal.—Under this head come principally cod-liver oil, the syrup of iodid of iron, the hypophosphites, creosote, guaiacol, etc., although it is questionable that much effect is obtained from any of them. The various forms of tuberculin are not only ineffective, but by some are considered dangerous when used for a longer time than is required to establish a doubtful diagnosis.

The employment of cinnamic acid and other so-called specifics has not been attended by sufficient success to justify their general recommendation. As far as can be judged at present, the question of medication seems to be more nearly related to a building up of the resisting powers of the patient than to any specific drug action upon the germ.

Hygienic.—Most cases of tubercular adenitis develop in the young under bad hygienic surroundings—in the slums, tenements and sweatshops of large cities, and wherever people are overcrowded, overworked and underfed, with lack of sleep, fresh air and sunshine. Hence, if we wish to obtain favorable results in the cure of the disease and in the prevention of relapse, too much attention can not be given to hygienic measures. In fact, these are relatively of as much importance as in the treatment of pulmonary lesions.

It has long been observed that these patients do remarkably well at seaside resorts—for instance, at Berck-sur-Mer, as reported by Calot. So thoroughly is this recognized that seaside governmental stations have been advocated. I believe, however, that a high, dry climate, such as that of Colorado, offers more advantages than the seashore in the treatment of surgical tuberculosis. It is well established, for instance, that tubercular bone lesions are much less frequent in Colorado than in most lower altitudes; and although I can give no statistics, I have reason to think this is true of glandular tuberculosis also. During a surgical experience of over seven years in Colorado, I have seen nowhere near so many glandular enlargements as I observed in an equal length of time in Cincinnati; and the cases have not been, on an average, so virulent. In short, there is reason to presume that our rarefied, dry and stimulating atmosphere, our sunshine, and our relatively outdoor existence, do more toward fortifying the resisting power of the body against lymphatic tuberculosis than does a residence at the seashore; a fact which we have

* Read before the Colorado State Medical Society at Pueblo, June 25, 1902.

long recognized, but have failed to emphasize as it deserves, our principal attention having been directed to troubles of a pulmonary nature.

LOCAL TREATMENT.

Non-Operative.—In order to promote cure and prevent relapse, it is of prime importance to abolish, if possible, the sources of infection—by attention to teeth, tonsils, pharynx and nose, and by the eradication of inflammations of the ears and scalp. The importance of the teeth has been demonstrated by Starck and by Koerner, the former finding decayed teeth in 41 per cent. of cases and the latter in 73.8 per cent. Starck also detected tubercle bacilli in old cavities in several instances. Goodale even asserts that many enlarged glands can be made to disappear merely by treating the tonsils with solutions of iodine, but this has not been substantiated to any extent by others.

Massage and such methods as crushing of the glands between the fingers or their subcutaneous division with small knives have been abandoned as ineffective and dangerous, because favoring local and general dissemination.

Ointments and counter-irritants are still in extensive use, although their utility is, to say the least, doubtful. As ointments, ichthyol, resorcin, and the iodide of lead are probably the best. The most reliable counter-irritants are tincture of iodine and green soap.

Trojanow, who has had a large experience with various forms of local treatment, places more faith in the application of heat (hot-water bag for an hour or two each day) than in anything else, but nevertheless, his results have not been brilliant.

The x-ray has not yet had its utility established, although some encouraging cures have been reported.

The interstitial injection treatment has been advocated for many years. Some substances are employed for their supposed direct curative effects, such as tincture of iodine (5 to 10 drops every four days); Fowler's solution in increasing doses (8-10-12 drops); solutions of carbolic acid, alcohol, acetic acid, nitrate of silver, corrosive sublimate, guaiacol, phosphate of iron, etc. Also camphorated naphthol, balsam of Peru, oil of cinnamon, cinnamic acid, iodoform, etc. Other substances, such as chlorid of zinc (2 to 10 per cent.), stronger solutions of carbolic acid, papain, etc., are used for the purpose of causing a rapid breaking down of the glandular substance, which is supposed to facilitate more effective treatment. The method of Calot, for instance, is to inject 2 per cent. chlorid of zinc, with a hypodermic syringe, every second day, until purulent softening takes place. The fluid is then aspirated and replaced with camphorated naphthol.

These procedures, although strongly advocated by their supporters, have given rise to disappointment in the hands of others. They are unreliable and not free from discomfort and ever danger, as proven by cases of poisoning from camphorated naphthol.

Iodoform (10 per cent.) dissolved in ether (Verneuil) or suspended in olive oil or glycerin (Krause), probably forms the best material for injection. The oil must be boiled and cooled; and before stirring in the iodoform, it must be sterilized by soaking for twenty-four hours in 1-1000 corrosive sublimate. Into glands which have not yet broken down, about half a hypodermic syringe is inserted every eight to ten days, while glands containing fluid are aspirated and then filled with the emulsion. Even this method leads to more failures than successes and wastes time.

In estimating the value of the injection treatment, it must not be overlooked that although certain glands

may disappear, there are nearly always others which can not be reached, or even recognized without a surgical operation, and these are only too apt to give rise to trouble in the future.

Electrolysis and the use of electricity in other ways have never attracted much attention, and the same may be said of subcutaneous curettement.

The concurrence of medical and surgical opinion is that the non-operative treatment of tubercular adenitis is unsatisfactory, except in incipient cases, where the glands are still small, movable and undegenerated; but these are the cases which, like the early stages of cancer, are seldom seen.

Operative Treatment.—The majority of cases are best treated by operation, unless the general condition of the patient forbid. The presence of tuberculosis elsewhere, even in the lungs, is, however, no contra-indication, except when far advanced. If operation were refused all consumptives in Colorado, as has been advised in the East and abroad, much injustice would be done both patient and surgeon. Every-day experience shows that phthisic cases take chloroform so well, at least in Colorado, that little danger is to be anticipated from its use, and the removal of glands may give a much needed impetus towards recovery.

Curettement is applicable to sinuses, to tubercular ulcers of the skin, to cases in which during a radical operation the extirpation of a gland is attended by too much danger, and to cases where the condition of the patient precludes extensive surgical intervention.

The results are good provided all the diseased tissue can be removed; hence, the greater the disintegration of the glands the better. It is at times almost impossible, however, to scrape away all the tough glandular substance from within its adherent capsule, and to go outside this barrier may be dangerous in the extreme.

The method has its shortcomings, and must be employed with caution. It is easy, for instance, to scrape a hole in the internal jugular, which is so often adherent to caseous masses. In addition, it is impossible to reach and destroy all the affected glands, while the excessive traumatism may disseminate the disease.

Cauterization of sinuses, after curettement, with pure carbolic acid, applied with cotton on a probe, and repeated at intervals of a few days, often promotes healing to a decided degree, but the injection of iodoform is of little service. The ragged, undermined and livid tubercular skin around the opening of a sinus must be scraped away in order to facilitate rapid healing.

Although so strongly recommended by Treves, the cauterization of glands by plunging into them the tip of a thermocautery has been practically abandoned in favor of radical operative measures. The same may be said of the use of the seton.

Complete extirpation dates back to the time of Galen, and was extensively practiced by Parré and Larrey. It may be easy or it may be one of the most difficult operations in surgery. Nearly always many more glands must be removed than were counted on beforehand. They often appear one after another in the wound in apparently endless profusion, so that what promised to be a simple excision of one or two movable lymph nodes turns out to be an extensive, complicated and serious intervention. No one should attempt an operation of this kind lightly, without a thorough knowledge of the anatomy of the parts, and a full command of the best surgical technic.

When the operation is once begun, it should be made as complete as possible. If any diseased glands are left

they are likely to give rise to future disturbance, although the slightly affected ones may, under proper hygiene, remain quiescent. This is fortunate, because it may be impracticable to follow all the eccentric ramblings of the tubercle bacillus throughout the intricate maze of lymphatic structures in the cervical region, Betagh even claiming that the fat is sometimes infected.

In simple cases, where a single movable gland or a small bunch of glands is to be removed, a short incision is sufficient, which can be stretched, if necessary. Transverse scars, although often objectionable for other reasons, have less tendency to spread and become hypertrophied than longitudinal ones. Transverse scars in the submaxillary region are at times almost invisible.

But in the majority of instances, where operations are required at all, they must be so extensive that small incisions are out of the question. No greater surgical indiscretion can be made than to attempt to remove a number of enlarged, matted and adherent glands through a small opening. Plenty of room must be secured, even at the expense of extensive scars.

Incisions of many forms have been devised by various operators. Nearly all are efficient so far as room is concerned, but many occasion unnecessary disfigurement. This is sometimes true of the "S"-shaped incisions of Hartley and of Senn, which pass transversely beneath the jaw to a point beyond the mastoid, then curve downwards and forwards across the sterno-mastoid, and finally backwards parallel to the clavicle. In most instances enough room is obtained by a transverse submaxillary cut extended in a curve over the upper portion of the sterno-mastoid and then straight down along its posterior border. If, however, according to Dowd, the horizontal incision is carried backwards to the hair, and then curved downwards along its edge, a large skin-flap is formed which gives excellent approach to the enlarged glands. If necessary, the incision may be curved forward above the clavicle. The resulting scar is not conspicuous, especially from the front.

Dollinger advocated operating through an incision placed entirely within the hair back of the ear, which is undoubtedly possible in selected cases, but desirable in very few, on account of difficulty and danger.

The slightest consideration makes it evident that no formal incision can be universally employed. The skin must be divided to suit the case—sometimes in one direction, sometimes in another, following natural lines of cleavage and concealing scars as much as is consistent with thoroughness and safety. The subcutaneous suture should be used whenever practicable, as it not only does away with unsightly stitch holes, but prevents the annoying turning in of the edges of the skin.

Although the division of the sterno-mastoid muscle, with subsequent reunion, facilitates ease and safety in operating, it is seldom necessary and should be avoided, if possible, as it may lead to deformity. Retraction of the muscle is usually all that is required.

Theoretically, it is best to remove the glands, their capsules and surrounding fatty tissue in one mass. Practically this is not always possible. Portions of capsule or even of glands may have to be left behind rather than run the risk of injuring important structures. Even in the most skilled hands these operations are frequently so long and tedious as to try the patience and endurance of the operator to the utmost.

The *jugular vein* should be at once exposed in difficult cases, either above or below the glandular mass. Its situation is then known, and it can be freed from abnormal attachments with considerable safety. It is

seldom necessary, as advocated by Stiles and others, to divide the vein between ligatures and remove a section along with the diseased tissues, or even to apply temporary ligatures with the idea of tightening them if required.

Injury to the jugular is not very uncommon. It generally occurs while the tissues are being pulled upon, thus stretching the vein and emptying it of blood, when it is easily mistaken for fascia and divided. Hence it is advisable to relax all deeper tissues before cutting.

Hemorrhage from a wounded jugular is alarming, but seldom fatal, for it can easily be controlled by pressure until ligatures, forceps or sutures have been applied. It is sometimes wise to leave the forceps *in situ*. The greatest danger, perhaps, lies in the entrance of air into the circulation. I have seen this on two occasions and fully realize its importance. Prompt closure of the opening with a finger is the best safeguard. The carotid arteries are much less liable to injury than the jugular vein, because their walls are thicker and their presence more readily detected by their pulsations.

Various nerves, however, must be constantly watched for by the operator. The one most exposed to injury is the spinal accessory, as it emerges from the sterno-mastoid muscle near the center of its posterior border. Although denied by some (Milton), the division of this nerve usually results in more or less atrophy and paralysis of the trapezius, which is noticeable in inequality of the shoulders and impairment of motion. If the divided ends are reunited with catgut, function may be restored within a few days. In one case I was unfortunate enough to cut this nerve in two places. Immediate suturing resulted in the reappearance of power in the trapezius within a week. In another instance about ten days elapsed before the shoulder could be spontaneously elevated. In the light of personal experience, I should not hesitate to deliberately divide the spinal accessory, when necessary, with the idea of reuniting it before completing the operation. It is readily detected by rubbing some blunt instrument firmly across the wound and noting the jerking of the shoulder when the nerve is touched.

The pneumogastric, phrenic, laryngeal and sympathetic nerves are well out of the way in most operations and are seldom injured. Division of the phrenic is a serious accident, but the pneumogastric and sympathetic may be cut without disaster. Injury to the facial nerve, followed by paralysis, is an unfortunate occurrence which may arise during the removal of glands in the neighborhood of the parotid. The inferior maxillary branch supplying the lower lip and adjacent parts may be cut while working in the submaxillary region, although this will not occur unless the bone is encroached on too closely. An unpleasant distortion of the corner of the mouth results, especially in talking. This may correct itself, as claimed by Dowd. If it does not, it has been suggested that the deformity can be mitigated by dividing the nerve of the opposite side. This is accomplished by slipping a tenotome from below under the tissues covering the jaw anterior to the facial artery, and severing the nerve against the bone.

Adhesions of glands to nerves and vessels may often be suspected because of various pressure symptoms, such as pain and numbness in the arm, engorgement of facial veins, weakness of the temporal pulse, etc.

When removing glands in the lower portion of the neck it is possible to injure the pleura, and, on the left side, the thoracic duct. Injury to the duct may not be noticed at the time, but manifest itself later by an

abundant flow of lymph. It is best managed by packing and often recovers.

It is wise to avoid division of skin nerves, but this is not often possible, so that anesthetic areas about the ear, for instance, frequently follow an operation. They tend to disappear in time.

Riedel's claim that the removal of too many glands from a given region may result in more or less permanent edema is scarcely tenable, as the connective tissue lymph spaces soon form an adequate collateral circulation (Bayer).

Drainage to prevent the accumulation of blood and serum is desirable, although it may be dispensed with in twenty-four hours. Dressings should exert as much pressure as is tolerable, by means of properly placed pads of gauze and a well-adjusted bandage. Plaster-of-paris casts or supporting sandbags are unnecessary. The lavage of large cervical wounds with strong antiseptics is not advisable because of the occasional powerful action on important nerve structures.

Especial care must be given to anesthesia, as there is once in a while a marked tendency to stoppage of respiration, although I have failed to notice this to the extent emphasized by Finkelstein.

The necks of those who have suffered from tubercular glands are apt to be disfigured by unsightly scars, which may be corrected by excision, skin grafting or filling depressions with paraffin. There is an unfortunate tendency, especially in tubercular lymphadenitis, for scars to become red and hypertrophied—a sort of false keloid. Sometimes this is unavoidable; but again it appears to be due to irritation of the immature cicatrix, and may be prevented by adequate protection of the part. Removal of such scars may be followed by recurrence.

STATISTICS OF OPERATIVE TREATMENT.

The exact percentage of complete cures following radical operations is difficult to obtain, for most cases soon disappear from observation. The available figures vary markedly. Wohlgemuth, for instance, reports 70 per cent., Hobel 68 per cent., and Von Noorden 62.4 per cent.—an average of 65 per cent. in 309 cases. Bloss, on the other hand, places the number of cures at 46 to 48 per cent., while Billroth obtained but 24 per cent.

The mortality, when the operations are skilfully done, is surprisingly low, most of the fatalities, as in goiter, being due to pulmonary complications. Too much should not be attempted at one time, and it is often better to operate in two sittings rather than attack both sides of the neck at once.

My own cases, although considerable in number, are neither numerous enough, nor have they been sufficiently well followed up, to permit of the drawing of reliable conclusions. My belief is decided, however, that radical operation is not only justifiable, but strongly indicated, in all serious or obstinate cases. And it must not be forgotten that better results can be obtained in Colorado than in lower, less favorable localities, because the chances of relapse are not so great.

SUMMARY.

1. The gravity of tuberculosis of the cervical lymphatics, both as regards local deformity and remote secondary manifestations, is generally underestimated.

2. General treatment, especially hygiene, is of the utmost importance, both in the cure of incipient trouble and in the prevention of relapses following operations on more advanced cases, most recurrences being due to neglect of such measures.

3. Residence at the seashore has long been recognized as of great benefit; but there is reason to believe that a high and dry climate, such as that of Colorado, with its rarefied, stimulating atmosphere and abundant sunshine, possesses superior advantages.

4. A point of extreme importance in local treatment is to abolish sources of infection, in the teeth, tonsils, nose, ear, scalp, etc., and neglect of this is apt to result in failure.

5. Non-operative treatment is often of doubtful utility, except in the beginning of the disease.

6. Pulmonary involvement does not contra-indicate operation, at least in Colorado, except in advanced cases.

7. Curettement is applicable to sinuses, tubercular ulcers of the skin, and where complete removal would be attended by too much risk. In all other instances a thorough operation should be done.

8. The size and shape of the incision should be adapted to the particular case. It should be free enough to permit of thoroughness and safety.

9. The chance of permanent cure following operation is probably better in Colorado than in lower and less favorable altitudes.

SANATORIUM TREATMENT OF TUBERCULOSIS.

ANALYSIS OF THREE HUNDRED CASES TREATED AT THE UNITED STATES MARINE-HOSPITAL SERVICE SANATORIUM.*

P. M. CARRINGTON, M.D.

SURGEON U. S. M.-H. S.
FORT STANTON, N. M.

My object in this paper will be to show briefly the results obtained in three hundred and three cases of pulmonary tuberculosis treated at Fort Stanton during a period of about two and one-half years by the open-air climatic treatment. In computing the value of these statistics the chronic nature of tuberculosis of the lungs and the comparatively short duration of treatment must be considered; the average length of treatment in the fatal and discharged cases having been something less than six months, including cases in every stage of the disease; in some the history only covered a period of two or three months and in others the disease had existed for years.

In one hundred and forty-two, or nearly 50 per cent., the history of the disease extended over a period of one year or more prior to admission. In a few cases the physical signs indicated lesions slight in extent, and there was little aside from the presence of bacilli in the sputum on which to base a diagnosis, but unfortunately the moderately and far-advanced cases outnumbered the early cases nearly five to one; some were so far advanced as to excite wonder that they were able to survive the journey to the sanatorium, and in one case death occurred at the railway station before the unfortunate patient could be transferred to the sanatorium; the statistics, however, are given you as they stand and, notwithstanding the great predominance of far-advanced cases, it is believed that the results attained will offer some encouragement to those interested in the climatic treatment of tuberculosis of the lungs.

LOCATION, CLIMATE, ETC.

Fort Stanton is located in Lincoln County, New Mex-

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ico, and has an elevation of about 6,100 feet above sea level. The annual rainfall is from 14 to 17 inches, and the mean average temperature is 55.6 degrees. The following is the weather observer's record for the year ended April 30, 1902:

Month.	Mean	Mean	Mean	Precipitation.	Cl'dy	Partly	Clear
1901.	Temp.	Max.	Min.	It. & S.	Days.	Days.	Days.
May	57.6	73.2	41.9	0.61	1	15	15
June	56.8	70.0	43.7	1.34	2	3	25
July	69.2	79.5	59.0	3.12	0	9	22
August	69.5	83.1	55.9	1.85	3	5	23
September	61.1	76.4	45.8	2.00	2	12	16
October	52.9	68.7	37.1	1.76	4	7	20
November	45.1	58.0	31.2	2.85	4	5	21
December	35.0	49.9	21.0	0.95	1	5	23
1902.							
January	36.6	52.1	21.2	0.05	4	7	20
February	38.5	55.4	21.6	0.38	2	2	24
March	40.6	55.5	25.5	0.22	2	5	24
April	53.3	72.4	34.2	0.00	0	4	26
Yearly av'r'ge	51.3	66.2	36.5	15.16	25	79	261

NOTE.—Cloudy means 7/10 to the entire day; partly cloudy means less than 7/10 of the day.

Fort Stanton was formerly a garrisoned post of the United States Army, but had been abandoned for several years when taken charge of by the Marine-Hospital Service, the old barracks and other buildings being remodeled and repaired for use as wards, quarters, etc. It was the first sanatorium established by the National Government for the treatment of tuberculosis.

The buildings were in such a dilapidated condition



Fig. 1.—Officers' quarters.

as to be absolutely uninhabitable when the station was established by executive order of April 1, 1899, and owing to the then distance from the railroad (about 75 miles) there was difficulty in getting workmen and material, and something over six months elapsed before any of the buildings were ready for occupancy, the first patient being received Nov. 18, 1899. We now have accommodations for about 150 patients, but additional buildings are being repaired for use as wards which will increase our capacity to about 225 patients. The sanatorium is now reached via the El Paso-Rock Island Railway; Capitan, seven miles distant, being our nearest railroad station.

We have our own ice and cold-storage plants, a fully equipped steam laundry and a modern system of plumbing, water works and sewage.

In establishing a sanatorium for consumptives at Fort Stanton it was the intention of Surgeon-General Wyman that the station should, in time, become in large measure self-supporting. With irrigation all kinds of farm and garden products grow luxuriantly and, while it is aside from the purpose of this paper, I may say in passing we produce all of our hay, a considerable portion of our grain and all our garden truck. A herd of Jersey and Holstein cows give us an ample supply of pure, fresh milk and also furnish a portion of our butter.

We are starting a herd of range cattle with the intention of producing our own beef. We also breed horses to a small extent, raise chickens, pigeons, hogs and Belgian hares.

The industrial character of our sanatorium enables me to give employment to a considerable number of recovered and convalescent patients, thus retaining them in advantageous climatic and sanitary environment for a longer period than they would otherwise remain. The difficulty, by the way, of retaining patients under treatment and observation for a sufficient length of time is one which we encounter daily; patients unaccustomed to restraint, except while on board ship, soon tire of the necessarily rigid regulations of sanatorium life. The use of alcoholic stimulants is forbidden except as ordered medicinally for a small percentage of cases; this is considered a hardship not long to be borne by those who have been steady and often hard drinkers for many years. The problem of how to keep men, accustomed as they are to the license of large seaports and lake and river cities, interested, amused and satisfied in an arid region is one not easy of solution. Unfortunately for our statistics, those who allow their longing for the delights of city life to curtail their residence in the sanatorium are usually those with fair or good chances of ultimate recovery while the unfavorable cases, almost to a man, remain. Several cases, favorable when discharged against advice, have returned after absences of two to six months, only to swell our mortuary records.

We try to keep the minds of our patients occupied;



Fig. 2.—Surgeon's quarters and assistant-surgeon's quarters

cards, checkers and other indoor games are provided (to be played out of doors as a rule); a few plant flower gardens and some have taken to golf, which affords a very suitable amount of exercise to a large number of ambulant cases. We have a very fair library, which enables many to interest their minds while taking necessary rest. Horseback riding is allowed a limited number of cases which are practically convalescent.

GENERAL STATISTICAL SUMMARY.

From Nov. 18, 1899, until April 30, 1902, the period covered by these statistics, 303 cases of tuberculosis have been treated with the following results: Forty-five patients have died, 9 discharged not improved, 97 discharged improved, 37 discharged apparently recovered, 115 remain under treatment.

Their ages were as follows: Under 25 years, 47; from 25 to 34 years, 118; from 35 to 44 years, 91; from 45 to 54 years, 33, and 14 cases 55 years of age and older.

In 31 cases, or a little over 10 per cent., there was a history of tuberculosis in either father or mother of patient. In 226 cases both lungs were affected and in 77 only one lung was involved. The tubercle bacillus was demonstrated in the sputum of 273 cases, and in 123 other organisms were found, their order of frequency being as follows: *Staphylococcus pyogenes aureus*, *Streptococcus pyogenes*, *Micrococcus tetragenes*, *Sarcina*

aurantiaca, *Leptothrix baccalis*, bacillus of Friedlander. The pneumococcus was absent. Two or more of these organisms were usually found in one specimen. Pulmonary hemorrhage occurred in 117 cases, in 77 before but not after admission, in 12 after but not before, and in 27 both before and after admission, showing that the risk of hemorrhage at this altitude and under conditions prevailing at this sanatorium is not so great as is popularly supposed. In 12 cases, all advanced, the larynx was involved; 46 cases were complicated with syphilis and 36 with malarial fever; in one case the bladder alone was infected, the bacillus being found by guinea-pig experiment; empyema was present in three

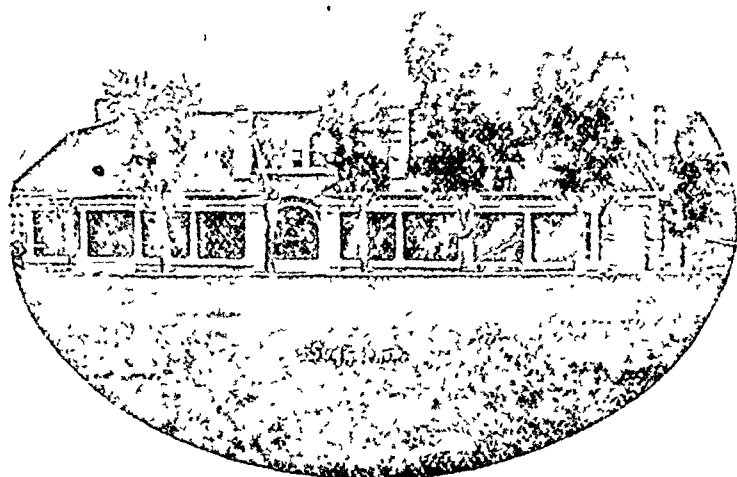


Fig 3—Office and laboratory building

cases. Tubercular meningitis occurred in three cases and in three there was involvement of the testicle.

Of the 188 cases who died or were discharged, 45, or 24 per cent., died; 9, or 5 per cent., were discharged unimproved, and 37, or 20 per cent., were discharged apparently cured. Ten fatal cases and 17 improved and unimproved were under treatment less than one month; one death resulted from acute nephritis, one from cerebral hemorrhage and one from syphilis of the

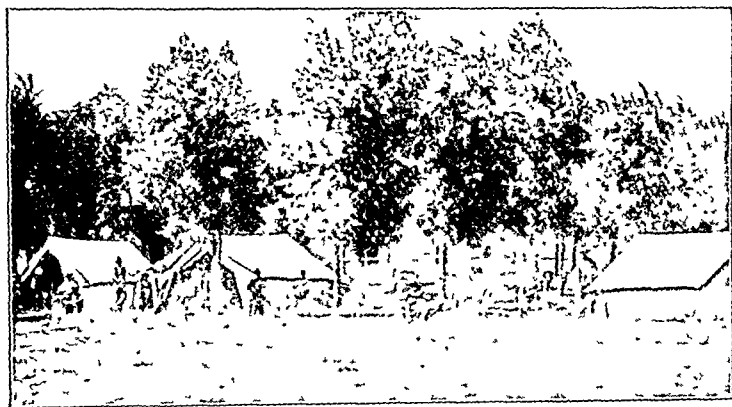


Fig. 4.—Patients camped in front of hospital

brain. Eliminating from the calculation those cases which were under treatment less than one month the percentages would be as follows: Died, 23 per cent.; improved, 53 per cent., and apparently recovered, 24 per cent.

STATISTICS OF THOSE IN THE EARLY STAGE.

The above figures include all cases of tuberculosis treated at this sanatorium during this period and the moderate and far-advanced cases outnumber the early cases by about 5 to 1. In considering these statistics I have divided the cases into two classes: The first stage or early cases in which there was no appreciable consolidation, one or both lungs affected, with or without

bacilli in sputum, with slight or moderate constitutional disturbance and with localized moist râles; the other class includes second and third stages or moderately and far-advanced cases with appreciable consolidation and physical signs attending same, one or both lungs affected, considerable to very severe constitutional disturbance, with or without bacilli in sputum and including those cases in which there was evidence of cavity formation. Of the first class we have treated 54, 40 have died or been discharged and 14 remain under treatment; the family history was positive in 7 and

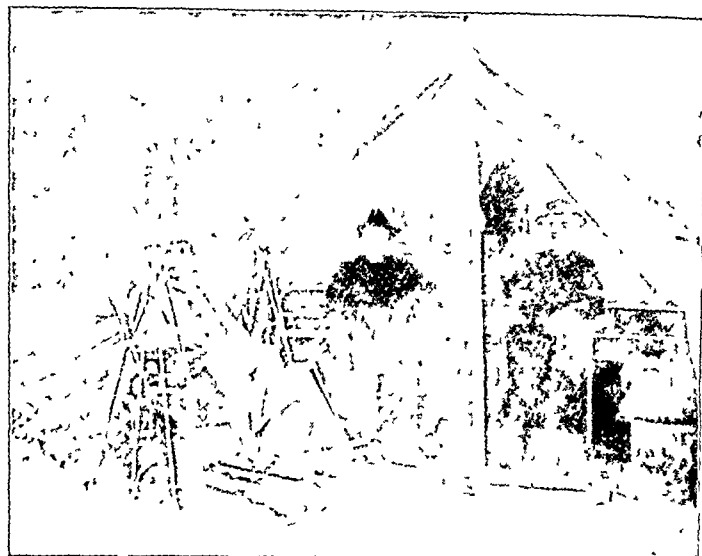


Fig 5—Tent life

negative in 47 cases, in 30 cases but one lung was involved and in 24 both lungs. tubercle bacilli were found in the sputum of 39 and other organisms in 27. In 50 per cent. of those in which bacilli were not demonstrated in the sputum there was syphilitic infection.

Tuberculin is not used for diagnostic purposes as a routine measure, owing partly to the extreme prevalence of syphilis in the class of people from whom we draw

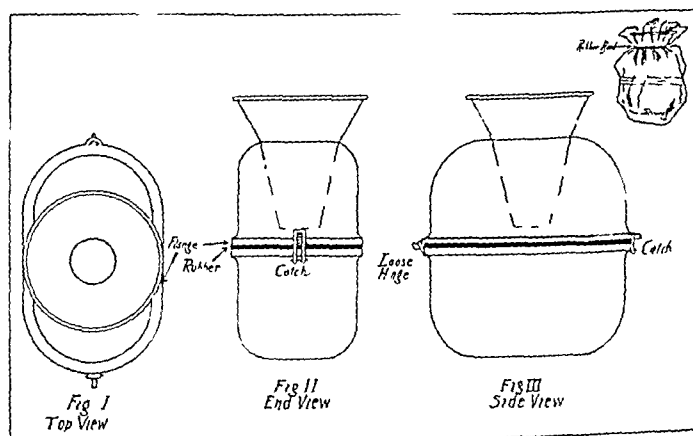


Fig 6—Pocket sputum flask M-H S pattern

our patients. We have recently begun injecting the sputum of patients, in which the bacilli can not be demonstrated, into the peritoneal cavity of the guinea-pigs, and in the cases in which this was done there were positive results in 66.6 per cent. and negative in 33.3 per cent. Hemorrhage occurred in 8 cases of this series, but in only two after arrival at the sanatorium; in 2 cases pulmonary hemorrhage was the first indication of the existence of the disease. Of the 40 cases of this class in which treatment has terminated, one, or 2.5 per cent., died, death being due to acute nephritis, 2, or 5 per cent., were discharged improved and 20, or 50 per cent., were discharged apparently cured; or, eliminating

10 unimproved and improved cases which were under treatment less than one month, and the percentages are, apparently cured 66.6 per cent., improved 30 per cent., and died 3.3 per cent. Eight of the cases still being treated are convalescent and six are much improved, both physically and in condition of lungs.

The average length of treatment in the 40 discharged cases was 131 days, in the 22 apparently cured cases 213 days.

STATISTICS OF THOSE IN THE SECOND AND THIRD STAGES OR ADVANCED CASES.

The total number treated under this heading was 249; in 24 cases, or something less than 10 per cent., there was a history of tuberculosis in either father or mother; in 196 cases both lungs were involved and in 53 but one lung. The tubercle bacilli were demonstrated in the sputum of 234 cases and other organisms were present in 96 cases, their order of frequency being:

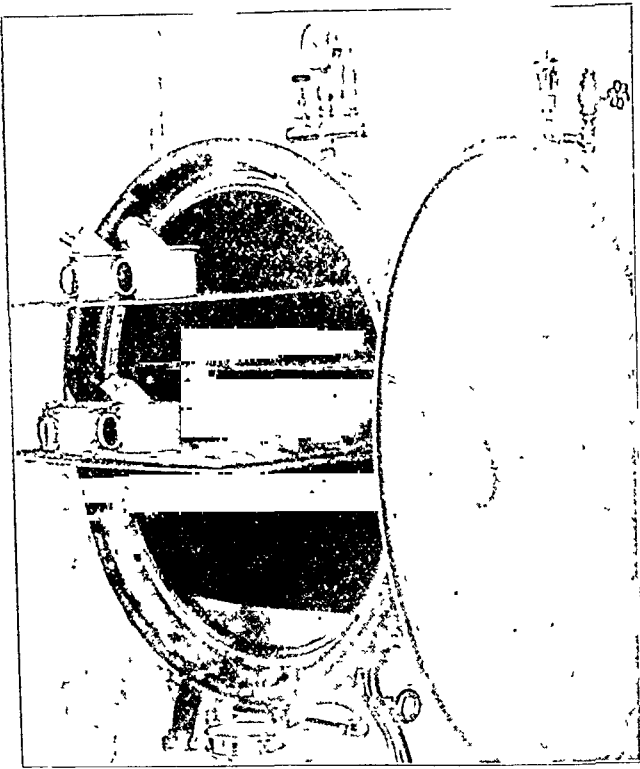


Fig. 7—Steam sputum sterilizer

Staphylococcus pyogenes aureus, *Streptococcus pyogenes*, *Micrococcus tetragenus*

The results of treatment in the above cases were as follows: 44 died, 7 discharged not improved, 80 improved, 17 apparently or clinically cured, 101 remain under treatment at date of this report.

In one of the cases included in the above series the bladder alone was affected and the guinea-pig experiment was used to demonstrate the tubercle bacilli. In one case the diagnosis was not confirmed, 01 tuberculin having failed to produce reaction.

In 109 cases pulmonary hemorrhage occurred during the course of the disease; in 71 cases there was hemorrhage prior to but not after admission and 26 both before and after admission. The larynx was involved in 12 cases and syphilis complicated in 36 cases. Of the 44 fatal cases included in this record 10 were under treatment less than thirty days and one died at the railroad station en route to the sanatorium. One death was caused by

cerebral hemorrhage and one by cerebral syphilis; in the former case the pulmonary lesions had almost entirely healed, and in the latter they were of secondary importance to syphilitic lesions.

Of the 148 cases under this heading, in which treatment has terminated, 44, or 29 per cent., have died, 7, or 5 per cent., were discharged unimproved, 80, or 54 per cent., were discharged improved, and 17, or 11 per cent., have been discharged apparently cured. Eliminating 10 fatal, 2 unimproved and 5 improved cases, which were under treatment less than one month, the percentages are as follows: died, 26 per cent.; not improved, 3 per cent.; improved, 57 per cent., and apparently cured, 13 per cent. The condition of the 101 patients remaining under treatment is as follows: apparently cured, 2; convalescent, much improved, 68; arrested, 21; worse, 10.

There are included in this series 39 cases which were permanently febrile; in 14 the fever was remittent and in 25 intermittent. The average duration of the disease prior to admission was 14 months, and in all but 3 the bacillus was found in the sputum; 9 were under treatment less than one month, 8 less than two months and 22 longer than two months; 30 of these died, 4 were discharged improved and 5 not improved; there was tubercular meningitis in 4 cases, the larynx was involved in 4 and other organs in 5; syphilis was a complication in 11, malaria in 10 and Bright's disease in 5. In 3 death was caused by hemorrhage. While most of our cases had fever at some time during the course of the disease, it usually, if present on arrival, subsided in a few days, but, as will be seen, those cases in which the febrile condition was permanent gave the greatest mortality; the intermittent cases usually showed a normal morning temperature and an evening temperature ranging from 38 to 41 degrees centigrade, the remittent cases usually had a morning temperature of about 38 and an evening temperature of not over 39 degrees; 16 other cases were characterized by subnormal temperatures with an evening rise above normal in 12 and a continued subnormal temperature in 4. The average previous duration of the disease in these cases was twelve and one-half months, and they all remain under treatment at this writing, 14 being improved and 2 not improved. These two groups represent the most unfavorable types of the disease as we see it.

MEASURES TAKEN TO AVOID INFECTION OF THE SANATORIUM.

Under this head the most important item, of course, is the disposal of the sputum of patients. Each patient is provided with a pocket sputum flask and a hand or bedside sputum cup, and they are forbidden to expectorate except into these receptacles, and no patient will be retained at the sanatorium who expectorates in any other place than the cups provided. All metal cups are disinfected by steam each day, the Seabury & Johnson cups being burned. A careful daily check is kept and any patient failing to present his cups for disinfection is at once reported to me for investigation.

While disinfection by steam is effective, there can be no question that destruction by fire is a preferable method, mainly because it is easier and more cleanly. I am now making arrangements to substitute a crematory for the steam disinfection of sputum. The main difficulty heretofore has been the economical construction of a destructible pocket sputum flask of effective pattern.

All tableware is treated by boiling water after each meal. Clothing and bedding used by patients is disin-

fectured by steam before going to the laundry. Once each month rooms and wards occupied by patients undergo disinfection, the methods employed being sulphur fumigation, formaldehyd and washing with bichlorid, 1:1000, the last named being the most used. Rooms and wards occupied by patients are frequently recalcimined.

GENERAL TREATMENT: TENT LIFE.

The essential elements of treatment followed here are life in the open air, ample feeding and rest or graduated exercise. The patients live out of doors the entire day and sleep with doors and windows wide open; many during the spring, summer and autumn months are quartered in tents. After a brief period of such a life patients become very fond of it, and there is very little trouble in persuading them to stay out of doors almost the entire time. Ordinary colds are extremely rare when patients become accustomed to the open-air life, and we have not had a case of pneumonia since the station was opened, nor have I seen a case in Lincoln county, although I have had a fairly extensive general practice for over a year in resident Mexican and American families.

Cases quartered in tents do better than similar cases in wards—several in the past month have gained from

ing bag and a greater number take daily walks, and a few of the best cases are allowed to take moderate horse-back exercise. While the relative amount of rest and exercise necessary for various stages and classes of the disease is difficult to specify, in general I would say that the amount of exercise allowable should be in inverse ratio to the activity of the disease; each case should be considered alone, and rest or exercise prescribed with the same care we use in prescribing other remedies.

MEDICAL TREATMENT.

Medicinally we treat the disease symptomatically; for the cough, heroin or heroin and terpin hydrate, and codein are our most effective remedies, but comparatively few cases require cough remedies after the first few weeks. Dyspepsia, perhaps, gives us more trouble than any other one symptom; for this pancreatin and salol are often effective. Warburg's tincture and other bitter tonics sometime restore the appetite, and we find the various malt preparations very valuable tonics. Frequently we find that loss of appetite is caused by constipation or torpid liver, and in such cases sodium phosphate gives excellent results. A large number of remedies of reputed or established reputation have been tried with varying success, but, broadly speaking, our

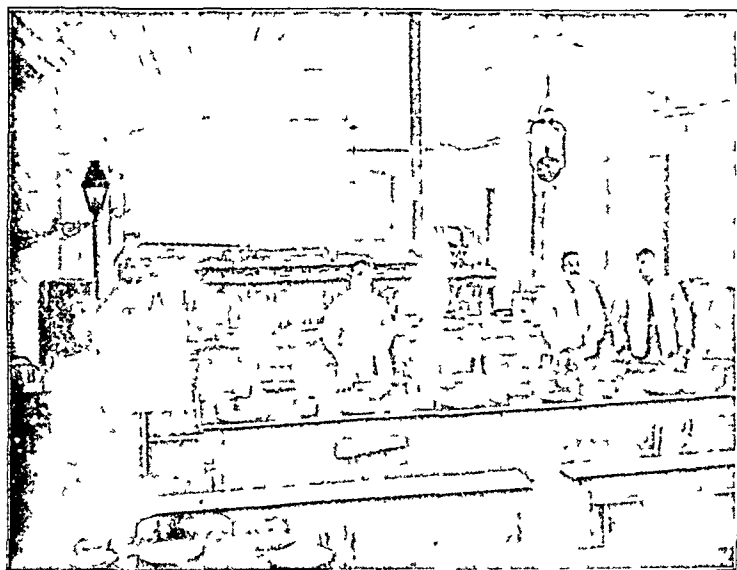


Fig. 8—Old dining room, soon to be converted into a ward

10 to 20 pounds in weight, and even febrile and apparently hopeless cases do better in tents; they are more comfortable, have less fever and cough and better appetite. The tent dweller loses all fear of night air, and the mode of life is so popular that I have recently been obliged to make requisition for an additional number of tents.

REST AND EXERCISE.

Most tuberculous patients seem to be under the impression that they should take as much exercise as they can possibly stand, and. I must confess, before coming West I had much the same idea. but my experience at Fort Stanton convinces me that more patients are injured by too much exercise than by too little; we find it constantly necessary to restrain our patients and order rest when they think themselves able to indulge in all sorts of exercise.

Cases having fever and hemorrhages, of course, require absolute rest, and those in which the disease is actively progressive should take but little exercise, and that of the gentlest sort. For patients who are convalescent making decided progress toward recovery we recommend one canquet and quoits. some use the punch-

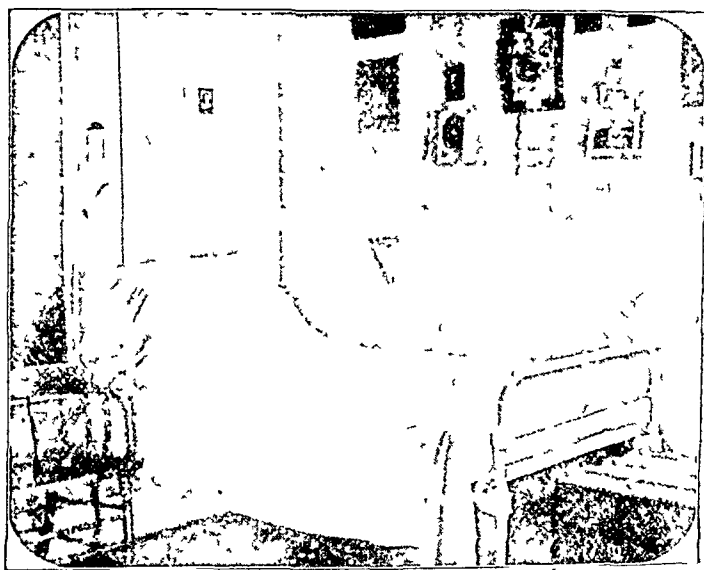


Fig. 9—Patient's bedroom in convalescent building

efforts have been to keep in normal condition all the functions of the body, promote and satisfy a healthy appetite. keep patients in the open air practically all the time and by watchful care see that they do not prejudice their chances of recovery by injudicious physical exercise or surreptitious over-indulgence in stimulants.

Whisky has its place in the treatment of tuberculosis, and we use it in something less than 10 per cent. of our cases; its excessive use is, of course, prejudicial, and we have had several cases which were previously doing well. but dated their decline from excessive drinking of smuggled whisky.

Hemorrhages are usually controlled by ordinary remedies, but whenever persistent or copious we have resorted to the use of Murphy's treatment—the injection of nitrogen into the pleural cavity. I have now under treatment two cases in which this treatment controlled what I am satisfied would have been fatal hemorrhages, and they are now both making very satisfactory progress toward recovery. In our experience this treatment seems to exert no beneficial influence on the lung lesions aside from the control of hemorrhage. but there has been

recurrence of hemorrhage in no case in which it was used.

Food is an element of treatment equally as important as air, and our aim is to supply patients all they can eat as often as they desire it. A diversified diet is prescribed, meat and fresh milk being served at all meals, and eggs for breakfast and supper; we also have a lunch of milk and crackers at 10 a. m. and raw eggs and milk in the afternoon are prescribed for patients requiring additional nourishment. We have had excellent results with tropon, one case on a diet of milk, raw eggs and tropon gained 14 pounds in a short time.

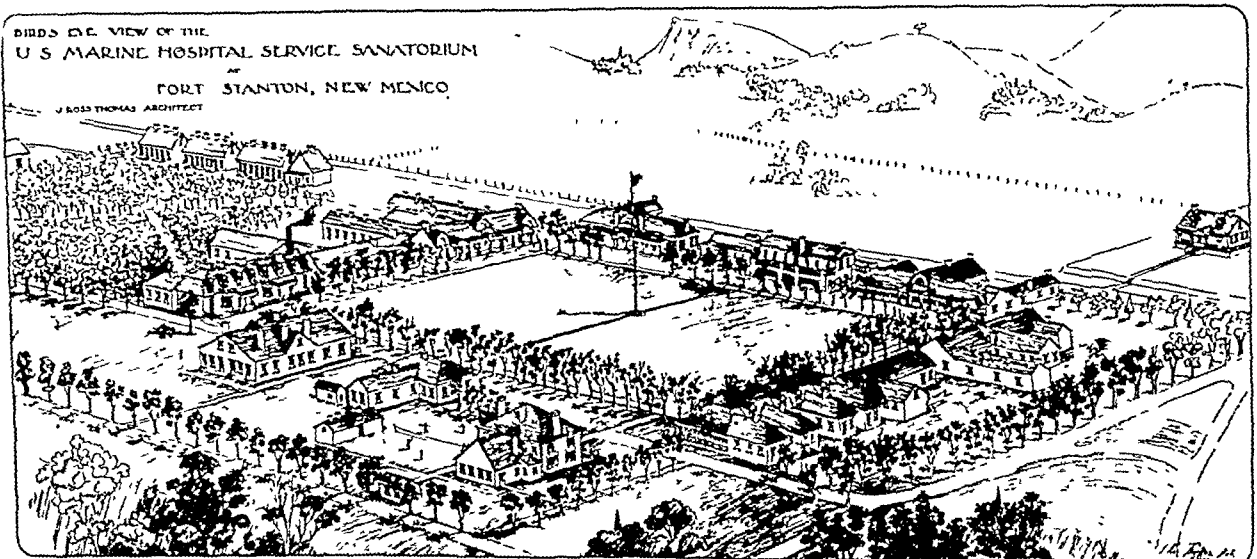
DURABILITY OF CURE.

The question is often asked: "If I become cured here will the cure be permanent and may I with safety return to my former home and occupation?" We have only been able to keep track of a few of our discharged cured patients, and in none of these has there been a return of the disease, but the data at present available are not sufficient to warrant giving a positive reply, either in the affirmative or negative to the question. I advise that apparently cured first stage cases remain in this or similar climate at least six months after disap-

He returned to his home in Washington, D. C., and about the middle of January wrote me that he had had a serious relapse, and asked to be again received as a patient. He was readmitted Jan. 28, 1901, and examined with more than ordinary care; there were physical signs of acute bronchitis, but the most careful microscopic examination failed to reveal bacilli; his sputum was then injected into the peritoneal cavities of two guinea-pigs, which were killed at the end of eight weeks and found to be in a perfectly healthy condition. This man recovered from his bronchitis in a short time and is now doing duty as night-watchman.

CASE 3.—The third case is that of a young man 21 years of age who was admitted, Aug. 28, 1901, in the first stage of the disease, tubercle bacilli being present in his sputum; he made rapid gain in weight; cough and expectoration ceased entirely by Jan. 1, 1902, and for more than three months he had absolutely no symptoms, and was about to be discharged from further treatment. A few days ago, on arising in the morning, he coughed once, expectorating a small portion of mucopurulent matter, which on microscopic examination was found to contain tubercle bacilli in considerable numbers well grouped. The bacilli had previously entirely disappeared from his sputum.

CASE 4.—The fourth case, in which there was extensive involvement of both lungs and larynx, with almost entire loss of



pearance of all symptoms, and second and third stage cases a year, but many of the latter would do better to reside permanently in a favorable climate. I cite the following cases as bearing on the point:

CASE 1.—W. D., aged 50 years, in the second stage of the disease, with consolidation of the upper lobe of the right lung, was admitted June 14, 1900, having had at that time the disease twenty months; bacilli were demonstrated in his sputum and there was mixed infection. He was discharged, apparently cured, Jan. 15, 1901, and employed as cart driver; his appearance was that of perfect health, and he remained well until June, 1901, when he had an attack of influenza; this disease ran its course, but the patient did not recover strength, and the cough continuing beyond the usual period led to re-examination of his sputum when the tubercle bacillus was again found. He was very ill for several months, and at one time it was thought he would die, but he is now almost well again. There is scarcely a possibility of reinfection in this case, but this seems rather to have been a breaking down of a partially or entirely encapsulated mass of tubercular deposit during the attack of influenza.

CASE 2.—A second case is more encouraging: W. K., aged 28 years, admitted Dec. 19, 1899, with consolidation of the right apex and the left upper lobe and a history of lung trouble extending over 11 years, was discharged apparently cured, Dec. 10, 1901, nearly a year after all symptoms had disappeared.

voice, patient extremely weak and much emaciated; was discharged after 15 months' treatment, and for the past year has been employed as wagon driver in the nearby town of Capitan, N. M. He has entirely recovered his voice, strength and usual weight, and remains well, so far as physical signs are concerned, and is strong and hearty.

The lessons and encouragement to be gained from these cases seem too obvious to require comment.

CONCLUSIONS.

1. Given a sufficient length of stay recovery may be expected in a very large percentage in first stage uncomplicated cases.
2. Recovery or arrest may be expected in a fair proportion of second and third stage cases and all the afebrile cases in which there remains sufficient sound lung tissue to support life, but we should exercise caution lest we be premature in pronouncing second and third stage cases cured.
3. Results in permanent febrile cases, especially those in which there is a wide range of daily temperature, are not better than in less favorable climates.
4. Hemorrhages seem less liable at this altitude than at the sea level.
5. Heredity plays an unimportant part in the causation of the disease.

control is directly demanded, some for whom the question is still *sub judice*, and some for whom this course appears contraindicated as follows:

1. Those for whom institutional care and control is demanded regardless of climate. Under this head may be properly grouped three fairly distinct classes.

(a) Those hopelessly ill and impoverished who may be permitted to enter segregation hospitals, apart from special sanatoria, where the last comforts of life may be administered without the slightest degree of danger to society, and where death may be robbed of a portion of its horrors through judicious nursing and medical care. Is it not apparent without discussion that the destitute and dying consumptive who is *persona non grata* in all municipal institutions for other classes of suffering humanity, and who is even denied admission in special sanatoria on account of the advanced nature of his disease, is entitled, however, from the commonwealth, on the grounds of humanitarian and scientific considerations, to some form of institutional provision.

(b) The consumptive poor who, in state sanatoria perhaps with industrial opportunities, can frequently be enabled to resume their duties and former positions in the community as wage earners. By this means protection accrues to society through the control thus offered of those unable in their ordinary environment to observe all sanitary precautions, and who necessarily tend in time with advancing infection to become a distinct element of danger. The consumptive thus receives from the state an energetic provision for the saving of life and health and the alleviation of suffering. His position in his family as a bread winner is materially improved, often preventing them from becoming a burden to society; and the state in turn from an economic standpoint adds to its resources by preserving one of its most valuable commodities, the earning power of labor. If it is incumbent on the state to provide for the poor who are not sick, but who have sunk to their present state on a line of little resistance through habits of shiftlessness, dissipation, or by reason of inherited perversion, and who may never hope to regain social cast or citizenship, how much more imperative is the demand to assist the consumptive poor who usually are not blameworthy for their misfortune, and for which society is to some extent responsible. The same reasoning may apply to our state prisons, reformatories and insane asylums, save for the single consideration of the public safety, and this appears a difference alone of degree.

(c) The ignorant or vicious, without especial reference to stage of disease, who refuse to conform to established rules and wilfully make themselves a public menace, for whom special detention institutions are appropriate.

This last-mentioned class of cases directly implies the necessity of inculcating a broader educational influence with its elevating and more submissive tendencies, through the wider, every-day diffusion of practical hygienic knowledge. Bearing in mind the two central thoughts toward which, as previously stated, all discussion of institutional treatment should be directed, and recognizing, as seems unavoidable, the utter inability of sanatorium construction alone to fully subserve such purposes, is not the thought sustained, although perhaps somewhat digressive, that certain corollary additions to sanatorium management are indicated to meet the requirements demanded by the enormous class of indigent consumptives. Such cases are out of all proportion to the capacity of any number of institutions, to say nothing of the pregnant fact that the true remedy

of the evil consists not alone in providing a temporary means of retreat for the victims of known conditions, but rather in conducting a definite system of defense. Such protection is to be accrued from the daily personal dissemination of practical truths in the very homes and workshops of the poor where exists the most "prolific habitat" of the disease. To this end and in connection with detention institutions is recommended the establishment of an out-patient dispensary service, with provision for the maintenance of an able corps of assistants for district work. These, by visiting the homes, studying the conditions and by power of kindly, personal contact, can not only relieve material conditions, but begin the actual propagation of knowledge. It is this educational influence within a community that reflects one of the chief benefits of all consumptive institutions. Those who have profited either at home or in sanatoria through the force of example, readily become in turn self-constituted apostles to spread broadcast the gospel to which they have become so much indebted.

It is reasonable to suppose that state and municipal sanatorium provision along the lines herewith suggested is not only obligatory from a high moral sense, but also practicable and economic as well.

CLASSIFICATION OF PATIENTS: 2 AND 3. SANATORIUM TREATMENT SUB JUDICE.

2. Those for whom institutional treatment *per se* is still *sub judice*.

(a) This division embraces almost entirely the large middle class with incipient infection and limited finances, for whom an inexpensive sojourn in a closed sanatorium offers some reasonable hope, if not definite assurance of improvement, without involving the financial sacrifice, the separation from family and friends, and the practice of rigid economy in a far country under strange conditions, and frequently with most unfavorable surroundings.

A tentative recourse to local sanatorium régime for such cases can not often result in any material injury, even to those subsequently sent away to seek climatic change. Their surroundings are certainly much superior to those previously experienced, and they are brought under the direct supervision of skilled medical advisers ready to recognize unfavorable changes or failure to respond satisfactorily to existing conditions. To these unfortunates the coming exigency may be earlier met than without an institution by a frank recital of the situation to the patient or friends with further climatic suggestions if within their practical means.

While the physician and philanthropic citizen of our open health resorts are ever ready to lend every aid to worthy impoverished cases of consumption regardless of length of residence therein or previous location, the fact remains that, generally speaking, it is no kindness to send such cases away from home. It can hardly be said that the consumptive with such limited resources profits materially from the hardships necessarily assumed by himself as well as imposed to some extent on others. Allusion is here made to those of his family who by dint of personal sacrifice manage to extract a mere pittance from their savings to contribute toward a portion of his support, and also to the resident employe in health resorts and his family in being forced to compete with the cheap labor of the unfortunate or desperate consumptive. While admittedly the invalid who is distressed financially is equally worthy with those more favored and is entitled to every sympathy and active consideration, this does not extend as a matter of real kind-

ness to sending him away without resources among strangers to battle against great odds in order to supply pressing necessities. With these the question is one to be reviewed with the patient in all its phases, and must be decided strictly on the special merits of the condition of the individual himself and is hardly subject to further generalization. Many such have less to lose and more to gain by residence in closed sanatoria. It must be insisted, however, that a certain proportion of such incipient cases without expectoration, without bacilli and without money, now frequently admitted to sanatoria, constitutes but a slight source of danger to the community, and with slight financial assistance in the beginning in an appropriate climate are not too ill to engage in some occupation, if necessary, with a reasonable assurance of improvement.

(b) Another class comprises those with considerably more advanced infection sufficient to render prognosis doubtful in any climate with perhaps a somewhat more comfortable financial status. With these the separation from family and relatives, with the necessarily prolonged absence, the knowledge of the grave possibilities, the physical discomforts and the mental anguish are frequently sufficient to cast the vote against the hardships of an extended journey and the struggling adaptation to radically new surroundings. Unfortunately, however, it is not to such a class that the sanatoria at present in existence extend a welcome. In all institutions with which I am familiar only the most incipient cases are admitted. To such an extent is this practiced, and naturally enough to be sure, that at a certain popular institution "patients are admitted from the list of those who have passed the necessary examination, not in the order in which they have applied, but according to their physical condition, the most favorable cases being admitted first." In view of the inability of such cases to gain admission to closed local sanatoria the only alternative short of despair is attempted climatic change. It is but fair to state that this procedure should not be resorted to without full appreciation on the part of the family of the utter uncertainties attending the change. Neither should it be undertaken without provision having been made to permit the subsequent elaboration of a sanatorium régime, or at least its approximate approach in a new climate where no admission blanks are required.

3. Cases for whom residence in local closed sanatoria are not unqualifiedly recommended.

In this class are embraced all with incipient or moderate infection who are not prohibited by financial or other cogent reasons from seeking climatic change.

In explanation of this somewhat surprising and perhaps arbitrary classification it should be borne in mind that the essence of this particular phase of the inquiry relates exclusively to the best possible provision to be made for such cases. An enormous class, who are intensely anxious to avail themselves of every rational opportunity to recover from their disease, appeal to their medical advisers for nothing less than that which offers the greatest and most reasonable assurance of ultimate arrest. Cases such as these, willing to enter the lists and engage in the prolonged struggle destined so frequently to be a trial to their patience and a test of their endurance, fortitude and bank account, with their own existence and the happiness of near ones as the issue, surely deserve such preparation and fortunate choice of battleground as will insure the greatest probability of final success. The situation is one fraught with tremendous responsibility. The obligation of the physician is not fulfilled by advising merely what is admittedly good,

but is satisfied only by urging only what is actually the very best for the individual case. It is not a question of the possibility or probability of securing arrest within a local institution, but rather whether such environment is, of itself, the method most likely to accomplish this result. The position of the physician is somewhat analogous to that assumed by the surgeon in considering the advisability of operation in appendicitis. It is admitted that the patient may recover in a given case without surgical interference, but insisted, notwithstanding, that his chances are better with immediate operation. The fact that invalids occasionally recover from incipient tuberculosis without climatic change is no more to be considered as an argument against the wisdom of its special application than is the recovery of a given patient with appendicitis without operation to be considered a reflection on its surgical utility.

Should not the physician in assuming to direct the destinies of his well-to-do-patients make a practical application of the condition to himself and advise in accordance with the course he would himself pursue under similar circumstances. Were such the case little doubt can exist as to the promptitude and certainty of action. The logic of climatic truths to be applied in this connection in appropriate health resorts consists in the more complete elaboration of the very principles on which depend the efficacy of sanatorium management, viz., an essentially out-of-door life. If the doctrine of out-door living means anything as directed toward the pulmonary invalid it means that the best results are to be obtained through its most complete fulfillment. It follows that the fullest conception of a proper method of open-air existence can be satisfactorily conducted only in those regions affording the maximum amount of sunshine with associated warmth and dryness together with favorable conditions of soil. If to these attributes be added moderate altitude and rarefaction there are exerted at once certain intrinsic influences distinctive of the locality, yet being in fact but the attainment of the higher results attempted in less favored regions along precisely the same lines. Reference is made to the continuous expansion of the contracted chest and the vesicle dilatation with increased pulmonary capacity through the unconscious efforts of lung gymnastics. In addition the increase in vigor of the heart contraction produces an acceleration of the blood flow and an equalization of the circulation diminishing the tendency to local pulmonary congestion. By virtue of these influences, together with the increase of hemoglobin and the number of red blood cells incident to the altitude, the desired changes in the appetite and nutrition are more readily secured. While it appears invidious in this connection to exploit ever so briefly the virtues of any particular climate, it is nevertheless opportune at a time of local sanatoria agitation with the prevailing tendency to repudiate the established facts of climatic influence to reassert the value of the conjoined effects of proper living together with an appropriate climate. As expressed in a previous paper: "If a suitable regimen without the favorable influence of climate is capable of producing a perceptible improvement in very incipient cases, how much greater and more enduring results and in how many greater number of cases, advanced though they be, may be obtained by precisely the same manner of life plus the beneficence of climate. If a system of regimen necessarily incomplete in moist, cloudy regions is good, a well-nigh perfect adherence to its principles in a land of perpetual sunshine, invigorating air, inspiring scenery and blue sky is certainly better."

Recognizing the comparative rarity with which consumption has originated for generations in the midst of certain climatic conditions, and the relative frequency of its development and rapidity of its progress in the absence of these essentials, does it not follow as a logical sequence that climate must irresistibly take its position as an important factor in subsequent efforts to secure arrest. Should we not expect invalids, other conditions of management being equal, to do far better under those climatic influences which have constantly sufficed to prevent the development of the disease than when subjected to the same treacherous conditions which have operated directly in favor of its spread and which will continue to be in force for all time? The same process of reasoning extended in its application to the more remote future of the consumptive, leads inevitably to the conclusion that the individual, once a consumptive and always a consumptive, possesses the inviolable right to be placed, if possible, in the midst of a new and more favorable environment. He is afforded the greatest degree of protection against renewed tubercular activity or reinfection and is offered at the same time facilities for industry and business enterprise with possibilities of advancement and fortune incident to a new country.

CLASSIFICATION OF PATIENTS: 4, THOSE NOT NEEDING SANATORIA.

4. The sanatorium management in appropriate climates as opposed to the so-called home treatment in health resorts.

It would seem that climatic conditions being the same the solution of this problem should be made strictly with reference to the relative degree of success possible to be attained in establishing and maintaining a perfected system of disciplinary régime under which is properly included outdoor living, rest and superalimentation. It is true that these three elements constitute the cardinal principles of treatment in any climate and are indispensable for the accomplishment of the best results. Were these the only essential factors involved in a question relating to the lives of unfortunates, but nevertheless human beings, the decision would be quickly made in favor of the superiority of the closed sanatorium régime in its fullest interpretation on some remote hill-top or isolated mountain side. The fact remains that the consumptive, by virtue of his inheritance, his numbers and his individuality, is entitled at least to the provisional consideration of certain other fundamental principles. In spite of his bodily infirmities he remains a human being, and is not to be rounded up in segregated herds and arbitrarily subjected to the same ultra-scientific principles applied to the lower animals, with the only criterion on which concerted action is based being the presence of a definite micro-organism. A problem so delicate can not always, though perhaps sometimes, be fairly adjusted by a summary recourse to its medical and strictly sociologic aspects. The logical deductions from precise scientific facts and their application to the practical problems of everyday life demands that true science in its broadest sense takes cognizance not only of the findings of the bacteriologist, the physiologist and the chemist, but also to some extent at least of the common-sense experience of the clinician who is brought into daily contact with conditions as they exist. Thus it is that while life in a closed sanatorium is perhaps more strictly in accordance with the principles of modern phthisio-therapeutic thought, nevertheless in its special everyday application it does not necessarily conform

to the judgment of the medical observer, who is brought face to face with the various conditions and is permitted to note the actual results.

This has long been pre-eminently an age of statistics and statistical observations have by no means been lacking to apparently demonstrate the value of the sanatorium treatment. Without commenting on the peculiar conditions which obtain in many instances in explanation of recorded results and in full appreciation of the manifold advantages of such régime, it is fair to state that the uniformly good results are to some extent due to the character of cases admitted and not invariably inherent to the institution itself. May it not properly be asked whether equal or in some instances better results could have been obtained by the same interested and able medical adviser outside his institution. By as much as it is not the sanatorium alone, but rather the attending physician that determines the influence for good, by just so far must it be remembered that it is not the disease to be solely considered, but the invalid himself. The question of success or failure depends frequently on his ability to adapt himself to unusual conditions, and frequently this strength of character is sadly lacking. The knowledge of this fact should preclude any arbitrary attempt to sink his personal preferences and individuality into a merger of consolidated consumptive interests. The sole claim of sanatorium advocates rests directly on the extent of supervision permitted with reference to details of life. If this is true, and likewise their contention that such institutions are primarily for early cases alone, it would hardly seem that the favored few cases of this incipient character without complications, actually require the degree of personal attention rendered several times a day in these institutions. If close daily supervision of early cases is not fully or invariably demanded for the real good of such cases, if living under the same roof is not actually required, what is to prevent the medical adviser from exercising a sufficient devoted direction for his patient if he so elects in suitable abodes conducted somewhat along the same lines as in well-regulated sanatoria in accordance with the same well-recognized principles but on a smaller scale, and sometimes more to the convenience, happiness, social welfare and material benefit of the invalids? The selection of a residence, as has been my custom for years, meeting all known requirements for the desired purpose as regards location, sunshine, porch room, with frequently outdoor sleeping accommodations, the wise grouping of a chosen few with reference to congeniality, temperamental peculiarities, tastes, stage of the disease and financial ability, the presence of a competent housekeeper, or, if need be, a nurse as well, and finally the continuous oversight of the always accessible medical attendant, must afford a combination sufficient to produce satisfying results. It seems unnecessary to more than mention the improved psychic effect of such an environment, which has indeed a potent influence with a portion of pulmonary invalids, in comparison with that resulting from the heterogeneous assemblage of consumptives in large, closed sanatoria. Is not the idea of a home and genuine home life the true ideal spirit to be fostered in such cases together with a certain judicious amount of medical supervision, this not being permitted to predominate offensively, but nevertheless in existence as a non-intrusive and often silent factor in the constant physical guidance of the temporary household. Inspired by this motive there has been erected on the outskirts of Denver, through the marvelous genius of its

There are various other drugs, none of which deserve serious consideration, as they are usually advertised by agents commercially interested in their purchase.

Another complication requiring special attention in the treatment of pulmonary tuberculosis is that of more or less chronic gastritis, and often dilatation of the stomach. In such instances all medicines should be discontinued and a careful analysis of the contents of the stomach should be made after a test breakfast. Where hypochlorhydria exists this should be corrected. In the majority of instances, however, the most desirable method of treatment is stomach lavage about three times a week, and, in cases where dilatation exists, this should be followed by Einhorn's electrode. We must remember that the necessary overfeeding of our patients will periodically give us more or less gastric disturbance, and that this condition must be removed before we can expect any good results in the way of hypernutrition.

THE BLOOD.

Some observers have stated that there is a condition of anemia which antedates the development of tuberculous infection. While not willing to assume, at the present time, that this assertion is not correct, I simply wish to state as a matter of record that, according to data compiled during the past year, forty-two cases showed that pure tuberculous disease itself, whatever its seat (Cabot), has no effect on the blood, that fluid being normal in every instance; second, that sixty cases would seem to show that the *Diplococcus lanceolatus*, associated with the tubercle bacillus, is the primary cause of the severe anemia; third, that twelve cases showed that, when we have a case of tuberculous diarrhea, it is the drain on the body albuminoids and not the tuberculosis which is the cause of the severe chloranemia met; fourth, that the slight rise in temperature we often get in pure tuberculosis has not the slightest effect on the hemoglobin; fifth, that the temperature we get in mixed infection drains the red corpuscles of their vitality and lowers their number; sixth, that in mixed infection, with cavity and moist râles, and secondary anemia with leucocytosis, seventy-five cases showed the polymorphonuclear cells increased at the expense of the leucocytes, the leucocytes being of the large variety. But when the moist râles disappear and the cavity dries up leucocytosis disappears. Seventh, the blood of pulmonary hemorrhage does not show any nucleated red cells.

Where anemia does exist it must certainly be corrected before we can expect good results from other treatment. Good diet, outdoor life, the intelligent administration of iron and arsenic combined will generally prove efficacious. Static electricity is a very powerful agent in improving nutrition when given in conjunction with one of the foregoing remedies.

Hydrotherapy is also a very powerful factor in placing the victim of incipient tuberculosis in a condition to overcome the disease. In all large cities, and in many small ones, there can be found hydrotherapeutic establishments where patients can be sent and treated two or three times a week.

THE LIGHT TREATMENT.

During the past few months the attention of the profession has been very strongly attracted toward the good results possible to obtain in the treatment of pulmonary tuberculosis by different light rays. We know how efficacious are the ordinary rays of the sun toward destroying the virility of the tubercle bacillus, and that six or seven hours' exposure will render innocuous the most virulent sputum. Beneficial results of light in

living and sleeping rooms are too well known to be mentioned here. It is generally conceded that patients living in sunless rooms will never—no matter how favorable their other symptoms—recover from tuberculosis. Light may be applied by the general practitioner in the simple form of sun rays to the bared chest; the patient selecting certain hours of the day, stripping to the waist and gradually tanning the chest as freely as the face. When possible, instead of using this mild form of light treatment, it is better to give them exposures to the rays of the arc light. Very beneficial results have been obtained with the arc light at my hands in cases of mixed infection and in some of empyema. Pus products very soon show a marked decrease.

The most powerful light rays at our command at the present time are very properly called the "x- or unknown rays." They are far more searching, their action is much more powerful and good results are obtained in a much shorter space of time in the treatment of carcinoma. With this treatment we are, to a large extent, groping in the dark. At present it is not a safe agent in the hands of the general practitioner unless he has taken a special course of training in the physics of the x-rays.

It is now a demonstrated fact that the x-rays are a specific form of treatment in external tuberculosis as well as carcinoma. In the writer's hands both external carcinomatous and tuberculous growths have been thoroughly inhibited. It is impossible to state at the present time whether the results obtained by different observers in this direction will be more permanent than surgical interference, but there is strong reason to believe that they will. The treatment of internal disease, whether of carcinomatous or tuberculous character, has not been as well demonstrated as that of the external variety, but from the present indications it is to be hoped that very many cases of both of these diseases can be radically cured. The question before the profession at the present time is whether the x-rays lose any of their power in passing from healthy tissue to diseased tissue; or whether sufficient force and penetration can be employed on internal diseases without destroying the intervening healthy tissue? If this can be accomplished we have no reason to doubt that in the x-rays we will shortly have our most potent agent in the treatment of pulmonary tuberculosis. Satisfactory results have been obtained in the treatment of internal carcinoma, and as the effect of the x-rays on external tuberculosis is so radical, reasoning from analogy, it should be as effective in internal tuberculosis as well as in carcinoma, provided the tuberculous process be sufficiently circumscribed or localized. In carcinomatous conditions of the uterus and in external tuberculosis or lupus, the writer has seen neuralgic pains disappear immediately, the secretion suppressed within a very short time, and the activity of the disease inhibited. Let us hope, therefore, that before long we shall be able to obtain as successful results in the treatment of internal tuberculosis. The technic of x-ray treatment should be carefully observed. The tube should be placed about 8 inches from the surface of the body and all areas not to be acted on should be protected by sheet lead and absorbent cotton soaked with water. The skin should not be too rapidly tanned or x-ray burned, and in treating the lungs it would be well to alternate the points of exposure. Vaseline can be rubbed on the surface at night. Exposures should be of ten to twenty minutes' duration and repeated three or four times a week. The mucous membranes are more tolerant of the x-rays than the skin. Possibly the x-rays

may have an inhibiting if not a resolvent effect on tuberculous infiltration or consolidation without cavities.

SURGICAL TREATMENT.

Surgical interference in pulmonary tuberculosis has not heretofore held out much hope. Tuberculous empyema, complicating pulmonary tuberculosis, should always be turned over to a surgeon for proper treatment. Tuberculous cavities lying near the surface or non-specific abscesses, when located near the base of the lung, are subjects for surgical interference. When these cavities are located in the upper lobes it is better to employ intratracheal antiseptic injections or creosote, or to inject these fluids directly into the cavity with a hypodermic needle through the chest walls.

Compression of the lung by nitrogen gas can be passed over in a few words with the following comment: It is applicable only when no pleuritic adhesions exist or where, if they do exist, they can be broken down with a legitimate amount of pressure.

SERUM TREATMENT.

Finally, the treatment of pulmonary tuberculosis by different sera must be referred to. After a number of years of trial this form of treatment is still in the experimental stage. In cases of mixed infection anti-streptococcic serum, in doses of 15 c.c., will act as a specific against streptococci, thereby reducing temperature and sepsis and greatly stimulating the patient's nutrition. Two or three injections are generally all that is required.

Antitubercle serum undoubtedly possesses, in selected cases where mixed infection is not marked, the power of stimulating nutrition and, by increased phagocytosis, aiding in the removal of the tuberculous deposit and temporarily, we know not for how long, increasing the resisting power or partially immunizing the patient.

25 East Forty-fifth Street.

SYMPOSIUM ON TUBERCULOSIS.

Two articles of this series have previously appeared in THE JOURNAL. They will be found in the issues of November 22 and 29. The remaining articles will be continued in succeeding issues as follows:

Recent Investigations Concerning the Relation of Human and Bovine Tuberculosis. D. E. Salmon, D.V.M., Washington, D. C.
The Intertransmissibility of Human and Bovine Tuberculosis: A Review of the Experimental Evidence. R. R. Dinwiddie, M.D., Fayetteville, Ark.

Discussion on the above seven articles.

Sanitary Measures for the Prevention of Tuberculosis in New York City, and Their Results. Herman M. Biggs, M.D., New York City.

Discussion.

THE MICROSCOPE IN THE DIAGNOSIS OF SCARLET FEVER.*

W. K. JAKES, M.D.

Professor of Chemical and Microscopical Diagnosis, College of Physicians and Surgeons; Director of the Laboratory, Chicago Health Department.
CHICAGO.

Since Dr. W. J. Class¹ called the attention of the medical profession to the causative germ of scarlet fever, I have been in a position to learn the value of the microscope in the early diagnosis of this disease.

In the year 1894 there was established at my residence by the Chicago Health Department a sub-laboratory for the examination of cultures from anginas. It was at first only intended to assist in the diagnosis of diph-

theria, but it was soon found that the culture gave more or less valuable evidence in almost every disease which attacks the respiratory tract. In differentiating influenza from other inflammations it is invaluable. The extensive use of the culture has demonstrated to me that the term pneumonia is a general one, and that there are several germs that are capable of causing a pneumonic condition in the lung tissue.

The term pneumonia is as indefinite as that of tonsillitis. While the lung tissue is so constructed that a certain train of clinical symptoms follows the invasion of any one of these germs, the prognosis and treatment largely depend on the nature of the invading germ. La grippe pneumonia, tubercular pneumonia or typhoid pneumonia represent distinct and characteristic conditions. Through the Health Department Laboratory I have been in touch with the various prevailing infections in my part of the city, and have examined yearly more than a thousand cultures.

Dr. Class made his announcement at the beginning of what has since proven to be the most extended epidemic of scarlet fever Chicago has ever known. During the previous four years I had become familiar with the nature of the inflammations caused by the *Staphylococcus albus*, and as soon as Dr. Class called my attention to the coccus he described, I found that it differed in many important respects from the *Staphylococcus albus*.

The Class coccus was at first limited to the cultures from those who were suffering from scarlet fever. I soon noticed that it was also found in the anginas of nurses or attendants who had come in contact with the disease. In those who were immune from previous attack of scarlet fever it was capable of causing only an angina.

Unless the bacteriologist is familiar with the Class coccus he would take it for a vigorous growth of the *Staphylococcus albus*, but a study of several cultures of the organism extending over some days will reveal its individual characteristics. These are so peculiar that it is difficult to place it in any class of bacteria. It is very sensitive to environment and is modified in form so it may appear as a diplococcus, a streptococcus or a strepto-bacillus, merging from one to the other in the same culture. Only by studying many cultures can one appreciate this variation in form. It also has a wide variation in size—from a point which can just be distinguished with an oil immersion twelfth to (in old cultures) a coccus a third the diameter of a red corpuscle.

The multiplication is by division and it multiplies in all of its varying sizes. Because of its minute form it can penetrate almost any tissue of the human body.

The shape, as usually seen, is round, with what appears to be a hole in the center. This is due to refraction or to staining qualities. As the germ increases in size a dividing line may be seen in the center. In the older cultures, where the coccus is large, on each side of this center line the cell substance stains in the shape of a crescent with the points toward the line. It is very susceptible to environment and is often seen to assume the streptococcus form or to become egg-shaped and sometimes almost a bacillus. These are a few of the important characteristics. A more extended description has been given by Drs. Class, Wynkoop and Jakes.

Before one is able to understand the value of microscopic evidence in the diagnosis of scarlet fever, one must appreciate that the scarlet fever germ is a pathogenic organism which requires a susceptible condition in the patient to permit its entrance into the blood and tissues, where it multiplies and produces the disease known as scarlet fever. Individual resistance and because one

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1. Medical Inspector, Chicago Health Department.

such invasion produces a life immunity, causes the larger part of the race to be immune against this disease.

The presence of immunity is an important factor in weighing microscopic evidence. Children who have had scarlet fever may be exposed to the infection and an angina result. A culture from this angina might show the scarlet fever coccus present, but because of the immunity due to a previous attack scarlet fever would not follow.

Only a small per cent. of the human race is susceptible to the invasion of this germ, and when it is present, even in large numbers, scarlet fever will not result unless the required susceptibility is present. The following is an illustration: A case of scarlet fever had been diagnosed as rheumatism. The patient, when I first saw her, was scaling profusely; large patches of epidermis were peeling from all parts of her body. Her infant, of two and a half months, which had nursed all through the disease, escaped until three months after, when it began teething; it then became infected and suffered with a severe form of scarlet fever. This case was also observed by another physician.

Each pathogenic germ has its favorite tissue to invade. Certain individual characteristics of the germ, the position and function of certain tissues favor this entrance. Hence we have the distinct parasites of the alimentary canal; those of the mucous membrane, etc. While germs have their favorite entrance to the body, other tissues may become susceptible and be the seat of disease. The clinical symptoms in the different tissues may be entirely different.

This is illustrated in tuberculosis. While the pulmonary tissue is the one most invaded, a joint, a gland or other tissue may become susceptible while the lungs possess immunity.

The clinical symptoms not only depend on the nature of the germ, but also on the tissue invaded. The pneumococcus may be able to invade the cerebrospinal fluid and produce a disease entirely unlike its invasion of the respiratory tract. The Class coccus may infect wounds, cause anginas and, as I have seen in one case, be the causative germ in pneumonia; but it only causes scarlet fever when it finds a susceptible patient whose blood permits sufficient multiplication to produce the disease.

Therefore, when a malignant growth is found in a culture from an angina, it is evident that the patient has suitable conditions in the mouth for the multiplication of this germ. The history of exposure, the absence of a previous attack, the age of the child and the constitutional symptoms, all give important evidence when combined with the growth of the culture and indicate whether or not the germ will invade the blood and cause scarlet fever. Thus, the combination of clinical and microscopic evidence will often make a diagnosis possible before the appearance of the rash. During the past winter I have been able to warn many physicians from the culture alone that the patient would probably have scarlet fever.

The entrance of the infection is usually through the mucous membrane of the throat, though it may gain entrance through wounds and is especially dangerous when introduced through the genital tract during parturition. The blood is the agent which distributes germs throughout the body. After they enter the blood stream the safety of the individual depends on the ability of the fluids to prevent multiplication and the tissues to resist the effects of the irritating germs. While at times there is a selective action, as a rule the severity of the case and the intensity of the rash are in-

dicated and correspond to the rapidity with which the germs multiply in the culture.

The stay of the coccus in the blood of those who recover must be very short and the time to obtain it is just before or while the rash is appearing. The blood, possessing germicidal powers, is the first tissue to rid itself of the germs, and it also becomes an active agent in destroying them in the various tissues. The skin is highly vascular and its layers are continually moving toward the surface, where they pass off in scales.

The surface of the scarlet fever coccus possesses a gluey property which favors its collecting in the finer capillaries of the skin. Its irritating qualities soon cause congestion which cuts off the bacteria in the superficial layers of the skin from the destructive action of the blood. When desquamation ensues the scales are filled with the scarlet fever coccus.

Laboratory workers have found that one way to increase the malignancy of a germ is to infect an animal and when the resulting infection is at its highest to again obtain the germs. In scarlet fever the skin is filled with germs at the height of the infection, and these are distributed through the scaling epidermis to infect other individuals.

It was pointed out long ago that the blood is the fluid in which the infection of scarlet fever multiplies. In the Class coccus we have a germ capable of passing through the mucous membrane into the blood and out again through the skin. As before stated, the susceptibility of the blood is essential in the production of scarlet fever.

As the rapidity with which the germ multiplies in the culture is of such value in making a diagnosis, some method by which this may be observed should be used. The test tube from which germs are removed by a platinum wire is not suitable. The metal culture boxes used by the Chicago Health Department for the diagnosis of suspected diphtheria are much the best. These permit the pressing on the surface, after a few hours' incubation, of a sterile cover glass and when it is removed it contains on its surface an imprint of the bacteria on the culture medium. Then the smear may be fixed and stained. This method shows all of the bacteria present and makes it possible to estimate which germs have multiplied most rapidly. The presence of the Klebs-Loeffler bacilli is easily noted. This method is of especial value in diagnosing the mixed infections so often present in anginas.

During the early part of this epidemic the diagnosis of scarlet fever could be made from the culture with more certainty than later when the disease became widespread. The whole city seemed infected, and many children, as well as adults, who possessed slight susceptibility had anginas in which the Class coccus was the causative germ.

My four years' study of the Class diplococcus may be summed up as follows: If a child has never had scarlet fever and the clinical symptoms are present (such as characteristic angina, vomiting, delirium and high temperature) a rapidly-growing culture of the Class coccus from such a case determines the presence of scarlet fever, while its absence excludes the disease. In some cases the culture has decided the nature of the disease before the rash was observed, the patient isolated and others protected. In other cases where the rash was present but the clinical symptoms obscure, the absence of the Class coccus decided the case as not scarlet fever. In mixed infection, where germs of scarlet fever and diphtheria are both present, the microscope is of life-

saving importance, as the more prominent symptoms of scarlet fever may obscure those of diphtheria.

In the diagnosis of scarlet fever the fact that the clinical symptoms are so prominent and unmistakable should not blind the physician to the fact that the microscope will give most valuable evidence, both as to the malignancy and the associate infections.

4316 Greenwood Avenue.

DISCUSSION.

DR. SENECA EGBERT, Philadelphia—There used to be some hesitation in the East about accepting the diplococcus of Class as the cause of scarlet fever. I think that the evidence submitted to us in this paper should help to remove the doubt. Dr. Jaques shows that a hidden danger may lurk in unsuspected scarlatinal anginas. All these cases should be carefully looked after, not only in the interest of the patient but in that of others who might acquire the infection.

DR. H. O. MARCY, Boston—How are the germs isolated and developed? Can the diphtheria and scarlet fever germs be grown together? Are there any prophylactic means by which we may hope to modify scarlet fever?

DR. H. D. HOLTON, Brattleboro, Vt.—I should like to ask if the author can differentiate by the examination of the germs between röteln and scarlet fever.

DR. JAKUES—Yes; it is possible by means of the test to exclude röteln.

As you will observe, I have been very conservative in my paper. I recognize the fact that the profession has not accepted the Class coccus as the causative germ of scarlet fever. To me it is as clearly the cause as the Klebs-Loeffler is of diphtheria or the pneumococcus is of pneumonia. I have given you a record of my observations with the hope that others may be able to profit by them. I believe if they will study this germ as I have studied it, they, too, may be able to obtain the most valuable evidence from the cultures of scarlet fever anginas. In more than one hundred cases I have been enabled to diagnose scarlet fever from the culture before the appearance of the rash. I have faith that if others follow similar methods they also may be able to have like results.

The Class coccus is not pathogenic to many animals, and this increases the difficulty of producing a curative serum. It multiplies with great rapidity and I am inclined to think it destroys by its multiplication and resulting complications rather than by its toxin. We must have a toxin to produce an antitoxin, and I now believe that the greatest hope of controlling this disease is in a prophylactic stimulation of the exposed person's cells. As a rule one attack of scarlatina produces a life immunity. Each individual cell of the recovered individual possesses great power of resistance toward the scarlet fever germ, and this resistance does not become sufficiently lowered during the life of the individual to permit a second invasion of the germ. If in some way the resistance of a child's cells could be increased when it is exposed to the disease, there would be a temporary immunity. The Chicago Health Department has made some experiments along this line, but the results have not been definite enough to publish.

In reply to the matter of the blood infection, I will say: It seems incomprehensible that this germ should be the causative germ of scarlet fever and have escaped the observation of thousands of trained bacteriologists. I can only account for it in two ways: first, that it so nearly, in its early growth, resembles that most common germ, the *Staphylococcus albus*; and second, because of the attempt of bacteriologists to make every pathogenic germ comply with Koch's law. We are now breaking away from this, and we are certain that the *Bacillus typhosus* is the causative germ in typhoid fever, even if it does not comply with Koch's law. We are also appreciating that each pathogenic organism is a distinct living being with its distinct laws of development. Because of these distinct properties and characteristics, it is able to invade certain tissues. Our success in the control of these germs depends on a complete knowledge of each germ. Think for a moment of each of the well-known germs of disease and see how each differs in its

properties and methods of causing disease. Therefore, we must expect that the organism which is capable of causing scarlet fever will have its own distinct characteristics. I hope that when the exact position of the Class coccus in the bacterial flora is worked out, we will be able to find some weak spot in its life cycle or some method of increasing the defense against this scourge of childhood.

DR. S. A. KNORF, New York—I would like to ask whether the author of the paper has ever tried to verify his experiments with monkeys; if not, I would suggest that it should be done because of the valuable information that has been gained with these animals in regard to other serums. I would like to see the *modus operandi* described a little more in detail, and would also wish to inquire whether an examination of the blood would not be more satisfactory.

DR. JAKUES—We have no monkeys in Chicago we can employ in that way.

It is difficult to get the germ from the blood because of its germicidal action. It must be taken from a vein during the appearance of a rash and at once mixed with a large amount of bouillon. I have never been able to develop it from blood spread on the surface of culture media.

DR. KNORF—What culture medium is used? Has any plan been devised by which the physician can collect the germs himself, and send them to the board of health, as is done with diphtheria germs?

DR. JAKUES—Certainly. The culture medium is the same, and the suspected material can be sent in the same way, and the answer given by telephone if necessary, which seems to me a matter of considerable importance, as it lets the physician know at once whether he has got to deal with a case of scarlet fever or must look for indications of diphtheria.

DR. D. T. NELSON, Chicago—There is a thought in my mind which I may not be able to make clear, but I think it raises an important point, and I should like to state it. Vaccination is infection with a disease, the same, but a milder form of smallpox. Now, smallpox you have but once, as a rule. So also with yellow fever, you have it but once, and the same is true of other diseases. Now the point on which I desire enlightenment is this: Is scarlet fever a disease which we are to cure by antitoxins or prevent by vaccination—whatever that means, which I confess I do not know? Are we to use vaccination as we do in the case of smallpox, or antitoxin as we do in the case of diphtheria? And is yellow fever to be prevented in the individual like smallpox by a kind of vaccination, or like diphtheria, to be cured only when contracted by an antitoxin?

DR. JAKUES—As I have indicated, I think the *Diplococcus scarlatina* is a distinct organism and that it has its own methods of multiplying itself and acting on the body. Each of these different organisms has to be fought in a different way and by different methods. I do not yet feel justified in saying that we have hope of discovering an antitoxin for scarlet fever. I have seen it reported, however, that a European physician has succeeded in curing a patient by serum taken from another person who had recently recovered from scarlet fever. There would, of course, be manifest difficulties in taking serum from the human body apart from the danger of transmitting syphilis and other diseases. I merely mention the fact to show what is being done in an experimental way. I hope that some day we will find an animal that will produce a suitable serum.

A French observer, Bougald, claims to have discovered the germ. In regard to the experiments on the pigs, I may add that the toxin was injected into other animals, and that they all took the disease.

DR. BENJAMIN LEE, Philadelphia—Can two germs be found in the same individual?

DR. JAKUES—Yes, the germs of scarlet fever and diphtheria can frequently be found in the same person, and this renders it important that we should ascertain what germs are present. I believe that many deaths attributed to scarlet fever are really due to diphtheria.

DR. A. R. REYNOLDS, Chicago—The Chicago Department of Health hopes to carry these studies further. At present we have not the necessary funds, but as soon as we get them we

will go into the country and conduct the experiments. Our experiments in the city, as you have heard, were interfered with by the outbreak of scarlet fever in adjoining buildings. This made the results we obtained open to some question. I hope in future we will be able to report experiments conducted under more satisfactory surroundings.

Dr. MARCY—What age were the pigs?

Dr. JACQUES—About nine months.

THE TREATMENT OF FRACTURES OF THE LOWER END OF THE RADIUS.*

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The *modus operandi* of reduction in fracture of the lower radial end depends, as in all fractures, on the type of displacement. In the majority of cases the fragment is directed upward so that there is a dorsal prominence. The joint not being concerned in such cases, generally called typical Colles' fractures, the shape of the deformed wrist resembles that of a bayonet or a fork. The Roentgen rays have shown, however, that the upward displacement, as a rule, is associated with side-ward displacement, generally in the outward direction, causing radial inversion and consequently slight shortening of the radial axis. In such cases the clinical diagnosis is not difficult. The lower fragment pushes toward the dorsum, at which a prominence is seen, near the wrist, corresponding to a groove at the site of the upper end of the fragment. The upper (diaphyseal) fragment presses against the flexors, producing a prominence further upward. The greater the prominence, the shorter the radial axis. Crepitus is, even in these typical cases, often absent. In a small number of cases the direction of the displacement is found to be toward the ulna, even if the diaphysis is not kept in pronation.

There also are a number of cases observed by myself, as well as by others, where the lower fragment is turned backward around the transverse axis. Sometimes the sagittal axis of the lower fragment is turned around. The oblique type (triangular fragment like the fracture *en bec de flûte*), in which the joint surface is split, has never been recognized before the Roentgen era. Figure 1 shows the flat upper surface of the lower fragment slightly turned inward in a case of this type. The detachment of the posterior border of the joint surface is rarer. Roberts also observed forward displacement of the fragments.

By being upwardly dislodged the carpal end is brought into slight supination, while the diaphysis is in decided pronation. The epiphysis being in very close connection with the ulna, the latter is slightly pushed toward the ulna if the ligamentous connection between the radial fragment and the ulna remains intact. This phenomenon finds its conspicuous clinical expression in the lateral prominence of the styloid process of the ulna.

Wherever displacement demands reposition the assistance of one or two persons is desirable, who should make counter-extension while the surgeon replaces the displaced fragment. After the exact situation of the fragment is ascertained by the fluoroscope, the surgeon knows at once how to replace it on its former and normal position. This is done by making manipulations

either in the way of pressing the fragment sideward and turning it, or by putting the wrist at a proper angle, and thus correcting the abnormal direction. It is needless to say that upward displacement requires pressure from above downward, outward displacement pressure from within and inward displacement pressure from without. The triangular type (Fig. 1) generally requires downward and inward pressure.

The following method I found most useful in the majority of these cases: The hand of the patient is grasped as in a firm handshaking by the left hand of the surgeon, while the patient's thumb is held by the right hand of the surgeon in such manner that the thumb of the latter presses the fragment downward



Fig 1—Oblique triangular fracture. (*Articular fracture en bec de flûte*)

while the surgeon's index finger presses it inward at the same time. If the direction of displacement is toward the ulna the surgeon grasps the patient's hand, including the thumb, with his own right hand and pushes the fragment outward with his left thumb while he supports the flexor aspect with the rest of his hand. During these manipulations counter-extension must be exerted at the elbow. If it appears to be impossible to reduce the fragment in this manner, anesthesia must be employed. This manner is sometimes facilitated by placing a book or a piece of wood underneath the ulna at the edge of the table.

I have never failed to reduce the fragments in fractures of this type since the Roentgen rays have become such a reliable adviser. Even in impacted fractures I

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.

could always disentangle the interlocked fragments. If there is a simultaneous injury of the lower end of the ulna showing displacement, special care must be taken to press the fragment in its normal place (Fig. 2). In multiple fractures, even in the much-dreaded Y-shaped variety, the articular arch of the radius may sometimes be restored by repeated efforts of reposition, controlled and corrected by the Roentgen rays. But if this proves to be impossible speedy osteotomy must be resorted to.

After reposition is accomplished a fixed dressing must be employed for the purpose of retaining the fragments in the proper position. This is not always easy. I find that no dressing accomplishes the purpose of retaining the fragments better than plaster of paris, since it adapts itself to the contours of the wrist in any desired

by well-padded splints. But no effort at reduction has been made. There is contraction of the fingers, which has not yielded to treatment yet.

If the direction of the displacement is slightly upward, or upward and outward, a plaster-of-paris dressing embracing the thumb is applied. I find that the



Fig 2—Displacement of ulnar end

shape or direction, and can be adapted to the individuality of each case

Before the Roentgen era the fear of ischemia and gangrene prevented me from using it immediately after the injury. Now, that the premises of ischemia are known to be wanting as soon as the pressure of displaced fragments is removed, such fear is uncalled for. So, while in former years I applied splints first and resorted to the plaster-of-paris dressing four to seven weeks afterwards, I now apply the plaster dressing immediately after reduction, resorting to the plaster-of-paris splint treatment a week or two later, as the case may require. If the protruding fragment is not reduced gangrene of the overlying tissues may be produced by any kind of dressing. Figures 3 and 4 show extensive gangrene at the dorsum as well as on the palm, which was caused



Fig. 3.—Pressure gangrene, caused by splints Dorsal aspect.

direction of the thumb influences that of the fragment to a great extent. The hand is moderately flexed at the same time. If gentle pressure of the index finger does not suffice to keep the fragment down, it must be pressed down by a signet or a wooden stick, around which the bandages are wound. After the splint

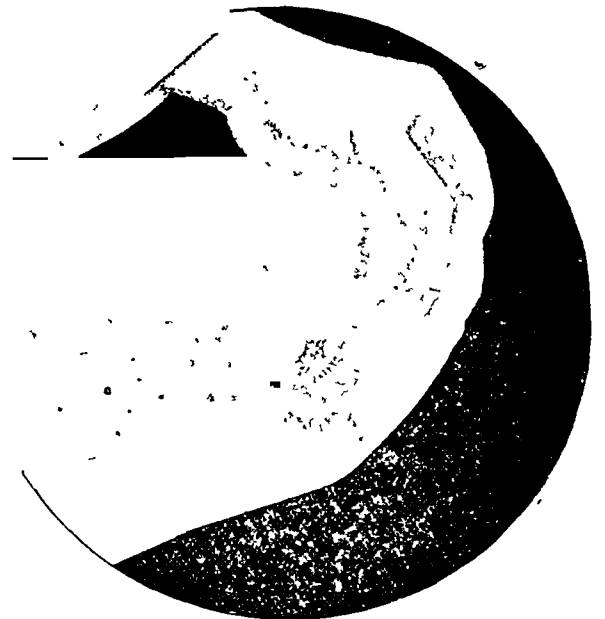


Fig 4—Pressure gangrene, caused by splints Palmar aspect

is fastened with a bandage the fluoroscope shows whether the fragment is in a desirable position. A dorso-palmar as well as a lateral examination must be made, because an antero-posterior view only shows whether the lateral displacement was reduced. The lateral examination also elicits whether there be any upward displacement.

Figure 5, for instance, illustrates an enormous degree of displacement in osteo-epiphyseal separation, followed by great functional disturbance. Dorso-palmar projection showed sideward displacement, but did by no means do justice to the real anatomic state, as it was found by lateral irradiation. The arch of the wrist is highly elevated, stretching the overlying tissues unduly. Four months having elapsed since the injury was sustained,

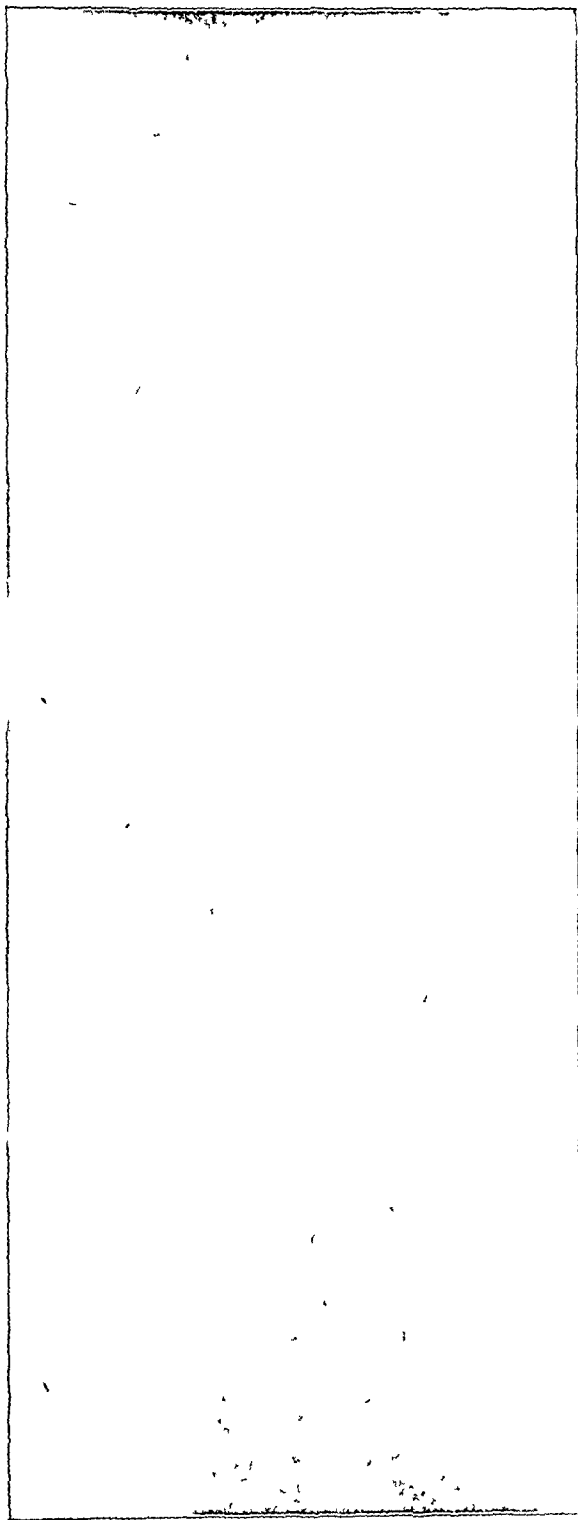


Fig 5—Considerable upward displacement in osteo-epiphyseal separation (Compare Fig 6)

the only remedy will consist in osteotomy. Figure 6 shows the shortening.

If the fluoroscope shows imperfect adaption the bandage must be removed and reposition done over again. Under such circumstances the fragments may be better retained if the thumb is pulled in an outward direction while the hand is shifted to the opposite side. The plaster-of-paris dressing applied in this position resembles the old pistol splint of Nélaton. Of course, the outward bending can be increased ad libitum. A sur-

geon must not lose patience if his efforts fail several times; by the fluoroscopic guidance he will at last surely find the proper angle, or, in other words, the most suitable position and shape of the dressing or splint for his individual case. One mistake often suggests the best mode of correction.

If the displaced fragment is directed to the ulna, in which case there is generally an outward bending of the ulna present, immobilization is kept up best by turning the hand inward. After a week the dressing must be removed, and if the edema has disappeared a plaster-of-paris splint, molded after the same principles, may be substituted, which can be taken off temporarily, so that massage treatment may be employed if necessary. The essential part of these splints is the encircling of the thumb, which guarantees absolute immobilization.



Fig 6—Upward displacement shown by Fig 5. Palmar prominence and shortening of forearm

In the case of a woman of 25 years the lower fragment was turned toward the ulna and also around the axis. It goes without saying that this extraordinary degree of displacement showed considerable deformity. Reposition was accomplished without anesthesia, the wrist being immobilized in superabduction. The skiagraph taken through the plaster-of-paris dressing showed that the abduction was overdone, wherefore another dressing was applied in moderate abduction. This position showed the fragment in better coaptation, but there was a tendency of the ulnar side of the fragment to project upward, partially filling up the interosseous space. Elastic pressure, recommended by me in the treatment of metacarpal as well as of metatarsal fracture, also proved to be useful in this case. A small piece of rubber drainage tube (the diameter of a small pencil) was placed alongside the interosseous space and fastened with a small strip of adhesive plaster. Now the skia-

graph showed perfect adaption. That it has spoken truthfully was evident from the absence of any reaction which should have been expected in view of the enormous degree of displacement and by the speedy and blameless recovery.

In the multiple T- or Y-shaped variety there are generally two diverging fragments, one being shifted toward the ulna and the other outwardly. By pressing the fragments asunder, so to say, the diaphysis is made to push itself forward so that it touches the scaphoid bone, the arm consequently being shortened.¹ Here the circular plaster-of-paris dressing in abduction is indicated. After that fragment, which is outwardly displaced, is pressed inward, a pad of adhesive plaster is placed above it. The fragment which is displaced toward the ulna must be shifted in the direction of the radius. To prevent slipping back, a rubber drainage tube is placed between it and the ulna at the dorsal aspect. By gentle pressure it is squeezed down in the

times impossibility—of perfect reposition of the splinters.

I confess freely that I often thought I had reduced a displaced fragment thoroughly because palpation seemed to give thorough satisfaction. But I was sometimes not a little surprised that the Roentgen plate showed me most impolitely how ill I had succeeded in my alleged reposition. In a former publication on the subject I have advised as a method of self-education to draw an anatomic sketch of one's silent diagnosis and then compare it with the skiagraph. Thus we learn on one hand that we can not always depend even on a highly cultivated palpatory talent, and on the other hand, we are taught to improve the power of judgment by comparing our sketch with the lifelike picture as it is given to us by the Roentgen rays. There is no doubt that the same good results can be obtained by other methods of immobilization, provided they are preceded by proper reposition controlled by the Roentgen light.

The main principles of treatment are the same for the other types of fracture of the lower end of the radius. There are, however, several modifications according to their different anatomy. If in chondro-epiphyseal separation no sideward displacement exists, the antero-posterior exposure shows nothing abnormal, while a side view may disclose considerable upward displacement. This is best treated by gentle downward pressure without using counter-extension and the application of a plaster-of-paris dressing in extension. If a lateral view shows any sideward displacement under the dressing, a pad of adhesive plaster is attached to the skin above the lower fragment and the dressing reapplied.

This is characteristically illustrated by Figure 7, which represents a case of separation of the radius associated with fracture of the lower end of the ulna. While the deviation of the ulnar fragments appear conspicuously, there is only a very slight inversion of the radial epiphysis noticeable. But it would indicate by no means that so enormous a degree of upward displacement would exist, as Figure 8 shows by lateral exposure.

In osteo-epiphyseal separation, where the fracture line is not limited to the epiphyseal cartilage, but extends to the diaphysis, a greater tendency to displacement is observed. The principles of treatment are the same as that of the complete fracture described above, since the tendencies to the various forms of displacement are the same.

Fracture of the lower end of the radius associated with fracture of the styloid process of the ulna is rather frequent. My own statistics show that the styloid process is involved in 30 per cent. of the cases. This injury was discovered long before Roentgen by Nélaton and Velpeau, and studied especially in this country by Pilcher, Roberts, Freeman, Corson, Thomas, Don, Haughton and Colton. I recommend the circular plaster-of-paris dressing in moderate abduction for this type. Sometimes it is possible to grasp the process and push it back into its proper place. This is easy, provided the process is displaced outward, but in case of inward displacement reposition is much more difficult. I found it useful to press this fragment outward by pushing the dull end of a pencil between the process and the radius and keeping it there until the dressing is completed, the bandages being wound around the pencil. A small piece of rubber tube being also placed there.

A small amount of pressure often suffices to push the fragment into position, while after the elapse of weeks the inversion of the process may cause intense pain on



Fig 7.—Chondro-epiphyseal separation of lower end of radius associated with oblique fracture of lower end of ulna

interosseous space and kept *in situ* by strips of narrow adhesive plaster, which do not entirely surround the arm. Since this type is intra-articular it is understood that there is always a well-marked extravasation, which may even extend over the sheaths of the tendons so that palpation is rendered difficult. There early massage is best employed to remove the extravasation

Among all the different varieties of fractures of the lower end of the radius these intra-articular injuries are most serious. It is only the continuous control by the aid of the Roentgen rays of the proper position of the fragments which will promise a fair result. In the case of considerable comminution a perfect restitution in integrum can not be promised. A skiagraph taken at the earliest possible moment is a valuable document for the surgeon, since it proves the great difficulty—some-

¹ See Fractures of the Carpal End of the Radius, etc. *Annals of Surgery*, August, 1901.

any effort of bending the wrist, so that removal by chisel may have to be considered.

Fracture of the lower end of the radius associated with fissure of the neck of the ulna is treated after the same principles as the complete fracture of the lower end of the radius. This applies also to fractures without displacement. But if there be displacement—generally outward bending of the fragment sometimes in spiral shape—after reposition a plaster-of-paris splint in moderate abduction is applied. A pad of adhesive plaster is also placed at the outer aspect of the ulna.

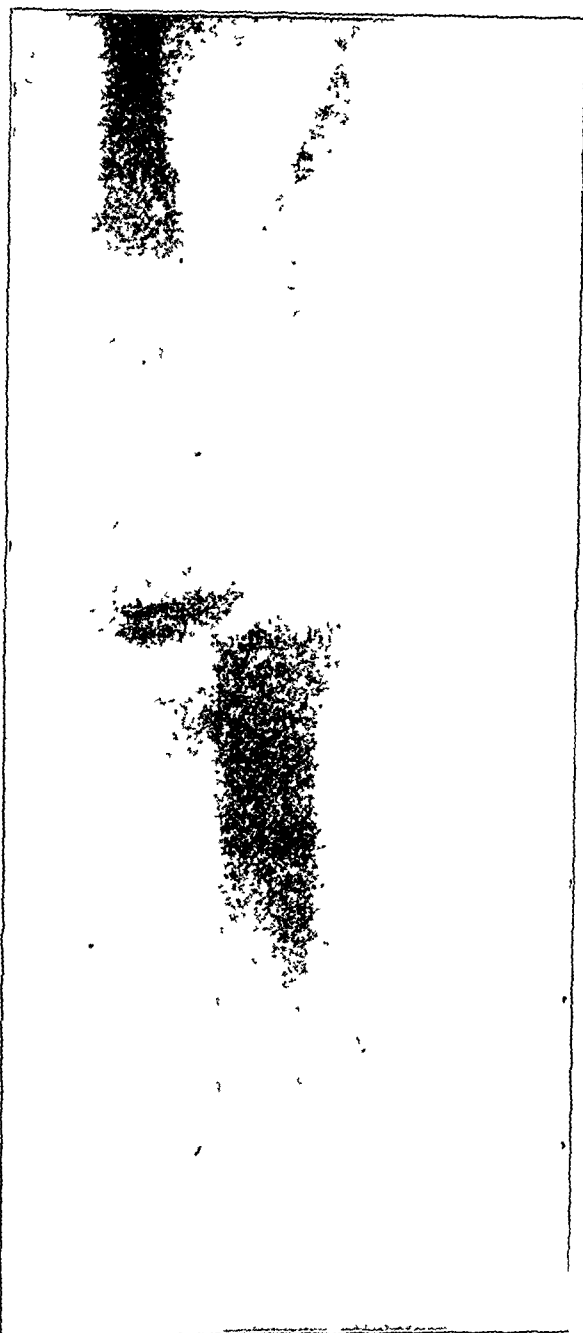


Fig. 8—Chondro epiphyseal separation of radius, associated with fracture of lower end of ulna in lateral projection case, illustrated by Fig. 7

Should there be any inversion a small rubber drain must be pressed in the interosseous space.

Another co-injury, the transverse fracture of the scaphoid bone, deserves thorough attention. Fortunately, as a rule, but little or no displacement is present, but the character of the injury being intra-articular it is appreciated that there is considerable intra-articular effusion, which is largely responsible for the great tendency to adhesion formation in these cases. The treatment is practically the same as that for the simple fracture described above, with the difference that motion must begin early. It is therefore advisable to re-

move the circular dressing somewhat earlier than in the other types and to substitute a plaster-of-paris splint of the same shape. This splint may be taken off temporarily every day so that gentle massage can be commenced.

Fracture of the little bone portions (chips), generally of the extra-articular type, are often confounded with contusion or distortion. In such cases massage treatment is manifestly inappropriate; the treatment should be carried on after the principle of the treatment of fractures, viz., immobilization. This should be kept up for at least the first week after the injury and after the little fragments are redressed. Such chips are sometimes not larger than the head of a pin, and if they are separated from the dorsal or palmar surface of the radius they may not be at all conspicuous on the



Fig. 9—Fracture of lower end of radius, followed by overlapping of fragment and palmar dislocation of ulnar end (Compare skiagraph 10)

skiagraphic plate, while a lateral exposure will show them.

If the massage treatment so commendable in contusion is used in these cases it is not surprising that the patient becomes rebellious. It is, indeed, not at all indifferent whether a simple bloody effusion or keen-edged bone fragments are kneaded.

If the principles of immediate reduction are adhered to, the "gibbous wrist" will cease to be counted among the inevitable inventory of surgical clinics. Still, I am afraid, this is still a pious wish as long as there are surgeons who imagine that by virtue of their own especially developed palpatory talent they can judge the details of any fracture without the aid of the Roentgen rays. Some are willing to use them in "obscure" cases, but they do not realize that the cases which they regard as "non-obscure" would appear in a different light when

skiagraphed. In other words, what they regard to be a simple fracture turns out to be a complicated condition. The paradox may be justified here, that if they would see this complicated condition or the fracture type in its proper light, it might appear obscure to them.

Up to the present the question of correcting the deformities will have to be considered. Two to three weeks after the injury correction is possible by simple refracture. After the lapse of four to five weeks the only remedy consists in osteotomy in the fracture line. Aged persons suffering from deformity of this kind are exempted. If they suffer while motion is made, immobilization is best kept up with a moss bracelet until ankylosis of the wrist has taken place. Sometimes a small wedge must be excised from the ulna in order to permit of perfect reposition. Such operations must be performed under the strictest aseptic precautions—tearing of the wound edges must be avoided and the

and associated with palmar dislocation of the ulna. The protrusion at the flexor aspect corresponds to the projection of the diaphyseal end, while the dorsal prominence indicated the riding of the epiphysis. Figure 10 also shows the forward dislocation of the ulna, the extent of which is proportional to the amount of yielding on the part of the epiphyseal fragment. Consequently the arm was shortened. Skiagraph 11, taken through the plaster-of-paris dressing two days after osteotomy, shows the trimmed radial fragments in appo-

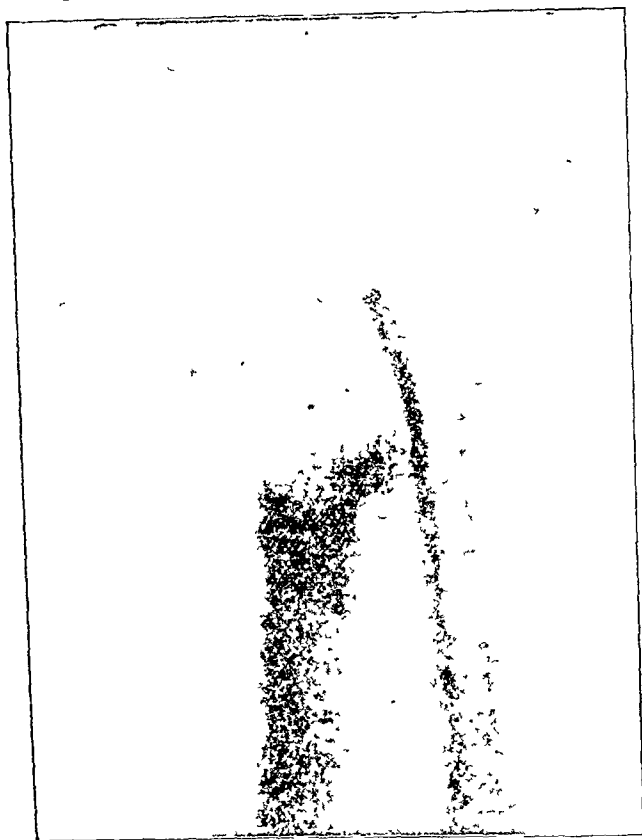


Fig 10—Skiagraph of hand, illustrated by Fig. 9



Fig 11—Skiagraph after operation showing trimmed radial fragments in apposition and the dislocated ulnar portion resected

wound itself should come in contact with the hands of the surgeon as little as possible, since all the work can be done with well-sterilized instruments. If the Roentgen rays show the efforts of early reposition to be unsuccessful under anesthesia, it is much wiser to expose the fragments by open incision at once, than to wait until the tissues around the area of faulty union degenerate. As soon as the bloody effusion is absorbed, the operation should be performed. Isolated bone splinters, the periosteum of which shows no more coherence, must be removed. If the fragments can not be brought into apposition by simple reduction, then the ends must be trimmed properly with wire, saw or chisel, and either indented or wired.²

Figure 9 shows the fracture of the lower end of the radius followed by overlapping of the lower fragment

sition and the dislocated portion of the ulna resected. Consequently the extremity became an inch shorter.

Diagnosis of Infantile Scurvy.—The differentiation of this condition from rheumatism, rickets, purpura and syphilis rests largely on the following points. Absence of fever. Early, constant pain, first in legs, then in back and arms, increased on motion—child lies with head flexed and rigid. Swelling at lower end of diaphysis of femur, very tender to touch, but neither red nor hot. Later stomatitis, bleeding from gums, nose, bowels, etc. The pathology consists in the anemia and the superiosteal and other hemorrhages. Rheumatism, which is rare under two years, is accompanied by fever and sometimes a red, hot swelling of the joints. Rickets is manifested by chronic painless swelling of the epiphyses and the presence of a rosary and head deformities. According to Pierson in *Progressive Medicine*

² As to the modus operandi see "Corrected Mal union," etc., Amer Jour of Med Sc, April 1902

SARCOMATOSIS CUTIS.*

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CHICAGO.

It would far exceed the time allotted should we attempt to consider the class of true sarcomata occurring within the skin, or all those forms belonging to the class of sarcoid tumors, as mycosis fungoids, lymphodermia perniciosa and leucemia cutis. We will limit ourselves to the discussion of the idiopathic multiple pigmentary or hemorrhagic sarcoma (Kaposi) and the so-called sarcomatosis cutis (Kaposi) and their relation to each other, after citing cases of the first type from our own observation, which, differing somewhat from the usual type, offers some interesting points which tend to show that in the two affections we probably have to deal with an identical process.

A. IDIOPATHIC MULTIPLE HEMORRHAGIC SARCOMA.

CASE 1.—C. L., German, 40 years old, married, has three healthy children. His parents died well advanced in years from causes unknown to him. He never suffered from any illness nor had venereal disease. His present affliction dates from the summer of 1896, when he bruised his left leg on stepping off a street car. Soon afterward his feet began to swell and to become very painful; after a month or two there appeared dark spots and lumps on his feet. In the course of time these increased in number and spread up the legs, while spots developed on the arms and lastly in the groins and armpits. Pain in the feet continued for about two years, especially when he attempted to stand up, so that he was confined to bed, and after that time it subsided so as to be felt in cold weather and then in the lumps only. Some of these lumps disappeared, while others developed.

Examination.—I saw the patient first in October, 1899. He was tall and strong. The mucous membranes were well injected, the nervous and vascular systems, the various internal organs, the blood and the urine were normal, the integument was affected on the extremities only, the feet and limbs were thickened nearly up to the knees, the toes were broadened and clumsy and at the interdigital folds were densely arranged filamentous, horny outgrowths, and on the dorsum of the toes, pea to bean-sized, bluish-red, smooth and moderately firm nodules. On the inner side of the sole of the right foot were three plaques of the size of a quarter, arranged behind each other. The middle one was slightly raised and of a bright red color, which disappeared on pressure. It was beset with horny, thorn-like excrescences. The two others were of a dirty grayish-brown color and were saucer-shaped, smooth, hard and horn-like. Around the malleoli were similar ones. On the dorsa of the feet and over the tibiae were various round or oval nodules and nodes from the size of a pea to that of a nickel, some bluish red, firm, smooth and round, and others dark blue, soft and compressible, also dark brown, slightly depressed spots and blue ones level with the skin. On the outer aspect of the right tibia in its upper half was a group of about forty dark-bluish pea to bean-sized nodules closely arranged, and bearing on their surface lamellous, easily removable scales. The nodules were compressible. There were two groups of nodules of precisely the same character on the inner aspect of the left tibia. On the inner aspects of the thighs and in the axillae were bluish-red streak-like spots arranged parallel to Poupart's ligament and to the axillary arch respectively. They were perfectly smooth, not elevated, but the skin beneath was densely infiltrated and scarcely movable above the subcutis. This infiltration extended throughout the affected area and beyond the spots. On the right external epicondyle of the humerus was a bluish-red spot of the size of a dime, smooth, not elevated nor the skin beneath infiltrated and its color did

not change on pressure. There was a spot of the same nature on the ulnar side of the left forearm.

Subsequent History.—The patient was soon lost sight of until January, 1902, when he reported that he had suffered from phlegmon on the left leg in the fall of 1899, and from erysipelas of the face in the spring of 1900. Of the lumps some had disappeared without leaving any trace, while new ones had developed. His health during all this time had continued good. The examination of the patient resulted in the same favorable general findings as at the first presentation, but the local symptoms of the skin had somewhat changed. The pictures, which I show you were taken at this time. The spots on the arms had increased in size, were darker and slightly elevated, but still movable with the skin. There was also found one red-blue spot of the size of a bean above the one previously described on the epicondyle. It was not infiltrated.

The thickened feet and legs presented the following appearance: Of the three discs on the inner side of the right sole, the middle one lacked the spinous processes in its periphery and was dirty yellowish brown, cornified and of saucer-like appearance, like the other two.

The plaques on the outer aspect of the right tibia which consisted, at the previous inspection, of numerous blue compress-



Fig 1 — Case 1.

sible nodules now present a brown and hardened area, flattened in the center, bearing a horny knob-like outgrowth and lamellous yellow-brown scales. The two plaques on the inner aspect of the left tibia had changed in their centers to corneous cauliflower-like formations with dirty yellowish scales on their surface. In the periphery of these plaques are two zones, the inner consisting partly of flat, hard nodules and partly of compressible tumors; the outer, of depressed pinkish skin surrounded by a dark brown line level with the surrounding skin. Besides there were found over the tibiae brown atrophic spots, flat and dense nodules and compressible ones, and also areas of the extent of a dime to a nickel of normally appearing skin, but which on touch revealed dense infiltration.

Over the posterior aspects of the femurs were a number of brown, irregularly outlined, smooth, non-elevated spots of the size of a bean to a half dollar, the skin beneath some of these and somewhat beyond being densely infiltrated. Below the right scapula is a reddish-blue spot of bean size, the last one to appear until January, 1902.

In the groins and in the axillae the streak-like spots became transformed into chocolate-brown, flat, firm nodules of the size and shape of a bean; with the underlying infiltration remaining.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. W. T. Corlett, L. Duncan Bulkley and W. L. Baum.

About May 10 of this year the right sole became more swollen and very painful. I saw him a week later and discerned on the diffusely swollen and bluish sole in the metatarsal region five violet nodules from the size of a pin-head to a pea, very painful on pressure, not raised, but distinctly palpable as spherical bodies. During the past year he had felt pain in the older lesions during cold weather only.

Microscopic Examination.—A bean-sized, moderately flat nodule was excised from the leg for histologic examination, the wound healing promptly. Histologic findings as follows: Stratum corneum, lucidum and granulosum well developed, stratum Malpighii somewhat narrowed. The papillary layer is obliterated, especially in the central part of the nodule. The corium contains an abundance of coarse, fibrous connective tissue and within this thin and coarse bundle-like masses of medium-sized or small fusiform cells, especially in the upper strata. These bundles cross each other in various directions.

On the other hand, there are found numerous aggregations of the same cells with scanty fibrous tissue, and more so in the deeper strata. Throughout the corium are numerous lymph-clefts.

Of the blood vessels, which are very numerous within the cell accumulations, some show thickened walls, which thicken-

urination and frequent and painful evacuation of his bladder. This condition became more aggravated until I first saw him in August, 1898.

Examination.—He was short, very emaciated and of sallow complexion, the mucous membranes pale, the lungs slightly emphysematous, the heart hypertrophic, the spleen normal, the prostate gland hypertrophied. There was retention of urine, chronic interstitial nephritis, sclerotic arteries and slightly elevated temperature. The blood showed hemoglobin 65 per cent., reds normal, whites slightly increased in number. The integument was normal except on the penis and lower extremities. On the skin of the under surface of the penis, just behind the glans, was a bean-sized, bluish-red, roundly elevated, firm nodule, movable with the skin and not painful. On the legs, and especially numerous over the tibiae, were nodules and tumors of sizes from a pea to that of a hazelnut, bluish or brownish, more prominent or flat, solitary and in groups, some soft and compressible with scales on their surface and others firm, while between these were blue and brown spots of various sizes. These were not elevated, but the skin beneath was infiltrated. Some of the brown spots were atrophic.

On the dorsa of the enlarged and clumsy feet were flat, dense, brown nodules of the size of a split pea to a bean. The inter-

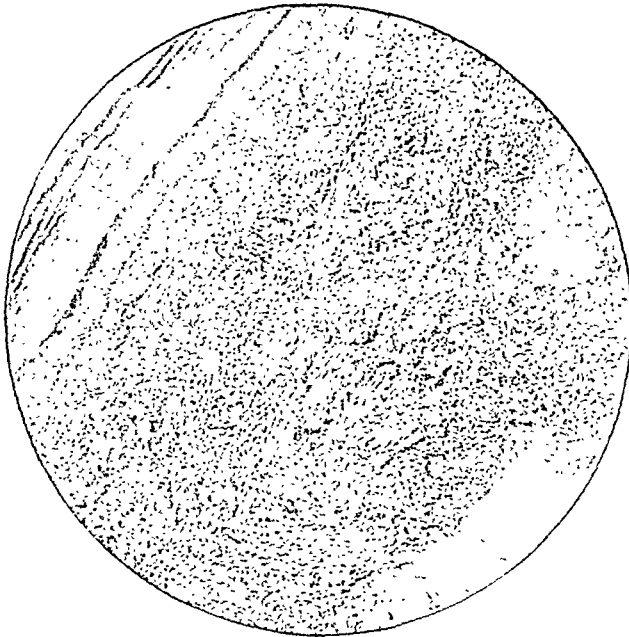


Fig. 2.—Case 2. Smaller nodule.

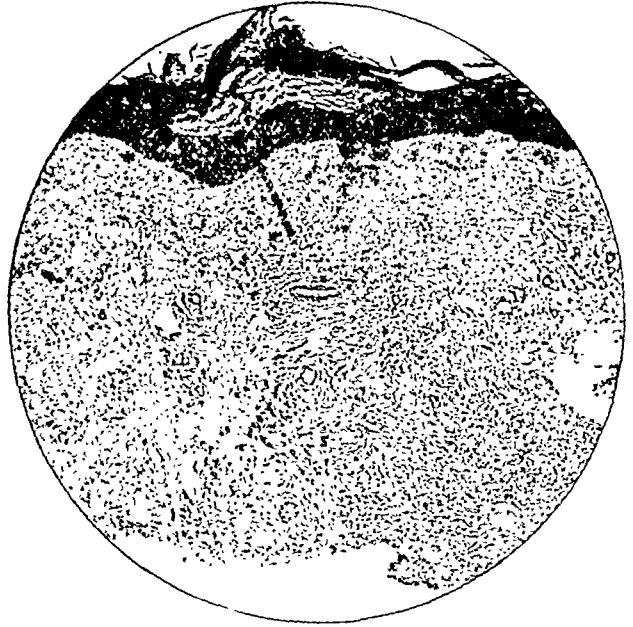


Fig. 3.—Case 2. Larger nodule.

ing is partly due to infiltration of the adventitia to which frequently are attached the streaks of cells and partly to a swelling and proliferation of the endothelium, while other blood vessels have a thinner wall looking as if ruptured. Some are densely filled with red corpuscles which may also be seen extravascularly.

Large masses of a yellowish-brown pigment are seen among the tissues, especially within the cell accumulations throughout the corium, besides pigment granules intra- and extra-cellularly, all this pigment giving the test of hemosiderin. Elastic fibers stained with Weigert's fuchsin-resorcin were found to be normal throughout the sections. Round cells are found here and there in small numbers intermingled with the others, while they are quite numerous around the sudoriferous and sebaceous glands and follicle sheets.

CASE 2.—H. G. Nothing in his family history has any bearing on his skin affections. He had no venereal disease. Ten years before I saw him his feet swelled and became painful, especially when walking. The swelling subsided to a certain degree, but after a time there appeared dark lumps on his feet and gradually ascending also on the legs, and at last one came on the penis. From time to time certain ones disappeared and others occurred. These lumps were painful on pressure. He complained of nothing else until five years after the skin first became affected, when he experienced difficulty in

digital folds of the toes were densely beset with rod-like, horny outgrowths like a brush. The inner side of the soles is the seat of dirty yellowish flat tumors, hard and cornified, elevated two lines above the level of the skin, with depressed center and smooth surface and of the size of a nickel to a quarter.

There was a similar one, bean-sized, anterior to the right internal malleolus and two, of the size of a quarter, below the left outer malleolus. There was no enlargement of the lymphatic glands. The patient died from uremia two months after I first saw him.

Microscopic Examination.—Two nodules from the leg, one pea-sized, of recent development and one bean-sized, of quite long standing, both moderately firm, were excised and prepared for examination.

1. In the sections of the smaller nodule: Stratum corneum slightly thickened, stratum granulosum narrow, as is also the stratum Malpighii. The papillary layer has vanished, the subpapillary layer contains wide lymph spaces, as does also the reticular layer of the corium. Throughout the corium, between sclerotic or normal connective tissue, there are round cells intermingled with sparse fusiform ones, arranged mostly in irregular streaks, and here and there in irregular aggregations. Around the glands is abundant round-cell infiltration. In many places the cell bundles are attached to the infiltrated adventitia of blood vessels. These are partly thickened, partly dilated.

There are no hemorrhages nor are there found masses of pigment.

2. Sections of the larger nodule show nearly the same conditions as those of the smaller, but besides there are found blood vessels with very thin walls, and densely packed with red corpuscles. Other free ones are found outside the vessels. There are also numerous masses of yellow-brown pigment and intra- and extra-cellular pigment granules. The cells, of which the round predominate, were arranged in a similar manner to those of 1.

COMPARISON OF CASES.

Comparing the anatomic findings in the two cases we observe in the first a prevalence of spindle cells, in the second of round cells. Both have a hazy, coarse, granular nucleus and a narrow zone of protoplasm. In the upper strata of the corium, in both cases, the bundle-like arrangement of the cells is more pronounced. While we find in the first case blood vessels with very thin walls and in places appearing as if ruptured, and numerous masses of pigment, and the same two conditions in the older nodule of the second case, these are wanting in the sections of the small recent nodule of the second case. In neither case was exulceration of the nodules observed.

Considering now the clinical as well as the microscopical findings of both cases, the diagnosis of *sarcoma multiplex hemorrhagicum idiopathicum* is justified.

OPINIONS OF WRITERS.

Since Kaposi¹ first reported these cases and applied to them the name *sarcoma pigmentosum*, the literature of the subject has increased considerably. A very animated discussion arose in regard to the name, inasmuch as this affection in some respects does not correspond to the requirements of a true sarcoma, that is to say, the tumors have a limited growth and may heal spontaneously.

On account of these and from differences afforded by a study of the histologic findings, Kundrat and Paltauf were of the opinion that these cases should be accredited to the group granuloma, which view is shared by other observers. Sellei² goes even so far as to propose for them the name *granuloma multiplex hemorrhagicum*. As if to do justice to both sides of the controversy Kaposi subsequently classed his pigmentary or hemorrhagic sarcoma in the group of sarcoid tumors.

The etiology of this disease is unknown. As early as 1882 de Amicis³ expressed the opinion that an infectious agent might play a rôle in the development of these cases. Other authors inclined to the same view, but hitherto no proof has been afforded by bacteriologic examination of the diseased areas or by inoculation. Another suggestion as to the etiology has been offered by Campana in his discourse,¹¹ in which he records a case showing neoplastic infiltration of the peripheral nerves in diseased areas, and therefrom drew the conclusion that the changes in the skin are trophic disturbances.

Semenow⁴ arrived at the same conclusion from the findings in one of his cases. There was accumulation of pigment in the spinal ganglia, swelling of the nuclei in the neuroglia and proliferation of the perineurium of peripheral nerves. He assumed to be supported in his view by the symmetrical arrangement of the lesions and the severe pain frequently occurring within them. However, it is well to question this theory on the ground that the skin is affected by the same cause and at the same time as the nervous system, or the latter is affected secondarily.

It seems plausible that this process represents a slowly growing sarcoma which may change secondarily and be-

come malignant and that the question of its etiology will not be solved before that of typical sarcoma becomes known. To speak with Perrin:¹⁰ "We are scarcely in the beginning of our knowledge of this affection." Therefore, we should rather accept the interpretation and the name which the genial diagnostician, Kaposi, has offered and so splendidly defended⁵ (1894), and not welcome other names or explanations unless they can be better substantiated.

This affection occurs mostly in males over forty years of age, but has been observed in a patient as young as five years by de Amicis.⁶ The diagnosis of idiopathic multiple hemorrhagic sarcoma offers as slight difficulty as its differentiation from other similar affections. The prognosis is unfavorable, although the administration of arsenic improves some cases temporarily, while there are even cases on record⁶ where permanent cure has been effected by the hypodermic administration of arsenic. It is of interest just here to refer to a case of Semenow's,⁴ in which an erysipelas migrans caused its cure.

B. SO-CALLED "SARCOMATOSIS CUTIS."

Let us now consider Kaposi's so-called *sarcomatosis cutis*. Kaposi describes it as follows: "On the trunk

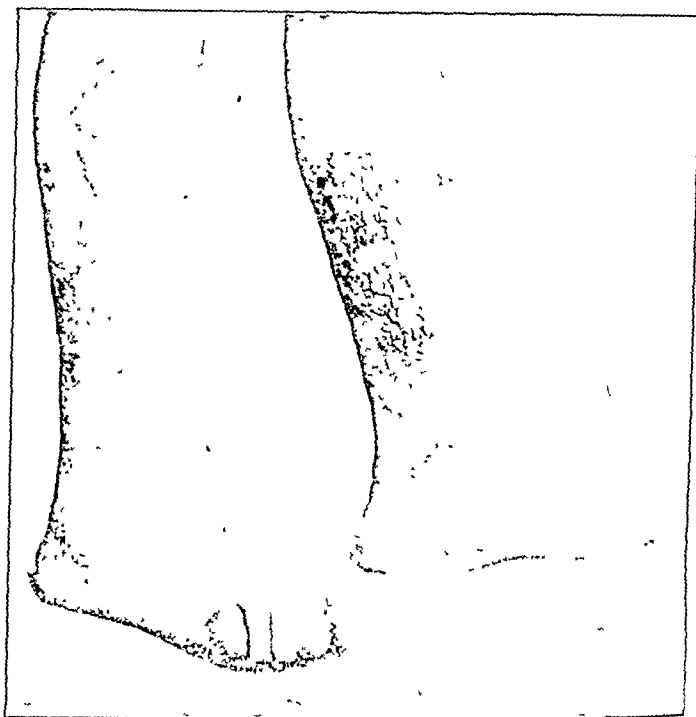


Fig. 4.—Case 1.

and extremities there appear numerous bluish, flat or more prominent spots, on the palpation of which there are felt in the depth of the skin firm, elastic, flat roundish plaques, not sharply defined. Besides these, firm plaques are felt over which the skin is neither protruding nor discolored. In one case the plaques were painful; in another on pressure only, and in a third case there were found bluish-red prominent, smooth and firm nodules of sizes from a pea to a hazelnut. besides larger flat plaques with central depression. There were no enlarged lymph glands, nor any alteration in the blood. These cases are curable by arsenic."

The histologic findings are, in Paltauf's opinion, somewhat similar to round-celled sarcoma. Cases of this type were further recorded by Joseph,⁷ Spiegler,⁸ Tandler⁹ and others, but their number remains in the minority in comparison with the numerous recorded cases of hemorrhagic sarcoma.

The histology of different cases differs somewhat, although in most of them similar conditions are encount-

ered, as in the hemorrhagic variety. The horny layer is broadened, the stratum Malpighii nearly normal, the papillary in some places vanished. The subpapillary layer shows sclerotic connective tissue and numerous wide lymph clefts. In the deeper strata of the corium, the real seat of the affection, between scanty, or in places sclerotic, tissue bundles there are embedded irregular masses of round cells (in Joseph's case fusiform cells arranged in rows, infiltration-like), or such cells arranged in bundles or streak-like.

Within the areas of cell accumulation are wide lymph clefts and numerous blood vessels, the endothelium of some of these latter swollen and in proliferation. The elastic fibers are preserved throughout.

COMPARISON OF TYPES A. AND B.

Although he insists upon strict division between the hemorrhagic sarcoma and the so-called sarcomatosis cutis, Kaposi admits that there might be transitional forms between the two, as between all other forms

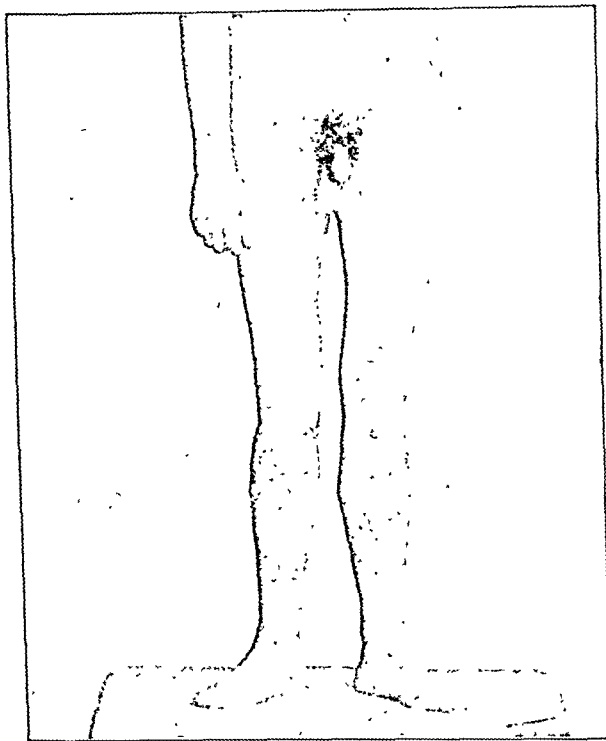


Fig. 5.—Case 1.

classified by him as sarcoid tumors. But we may go further and assume that this division can not be strict, but that both forms are the same process, with some modifications.

This view is supported by a study of our own cases. The character and arrangement of cells are in both types nearly the same. While it is assumed that the cells are arranged more in irregularly grouped masses throughout the whole corium in the hemorrhagic, and more especially in the deeper strata, and band-like in the form sarcomatosis cutis, yet we really find cases of hemorrhagic sarcoma, as our second one, where the upper part of the corium is only slightly infiltrated. In both of our cases the band- or streak-like arrangement of the cells is prevalent throughout. It is further claimed (Joseph l.c.) that the elastic fibers are wanting throughout the hemorrhagic node, while they are preserved in that of sarcomatosis. The fact is that they are unaltered in hemorrhagic cases, too, as is shown in our first case. Let us inquire in regard to the hemorrhages and

masses of pigment. We should find them in all cases of hemorrhagic sarcoma, but not in the other form. As above recorded, there were found no strong indications of such in the more recent and small nodule of our second case, while the older and larger nodule showed an abundance of them. From this we may infer that the hemorrhages and pigmentation are of secondary occurrence. The papillae are in a similar condition in the two forms, and the same is true of the lymph spaces. In our second case the latter were numerous throughout the sections; in the first they were found in the deeper strata of the corium only.

There is as much similarity in the clinical conditions as there is in the histologic. Concerning the clinical symptoms, we may state that in our first case there were found bluish-red spots in non-infiltrated skin, and bluish-red, rounded and firm, flat, or prominent nodules, as well as compressible ones, solitary or grouped, typical of the hemorrhagic form.

On the other hand, there were found characteristics of sarcomatosis cutis, such as bluish or brownish spots on densely infiltrated bases, as those in the axillae and inner and posterior aspects of the thighs, which infiltration reached into the subcutis and extended beyond the spots in the periphery, also irregular and dense infiltrated areas over which the skin looked perfectly normal.

Blood and lymphatic glands are found to be normal in both varieties. In the hemorrhagic form the skin becomes affected first on the distal ends of the extremities, but there are cases on record where another region took the lead. In the sarcomatosis cutis the skin lesions occur irregularly on the body, but they ultimately affect the extremities. The prognosis is favorable in the sarcomatosis, the cases yielding readily to arsenic, while in the hemorrhagic variety a few cases only are recorded as cured,⁶ temporary improvement only being the rule. There seems to be no doubt that the prognosis is rendered less favorable in the latter type by the occurrence of hemorrhages.

CONCLUSIONS.

The result of all the foregoing comparisons is that there is no great distinction between the two forms. It rather impresses one that they represent the same process. While some of the cases do not change secondarily, and are, therefore, more amenable to treatment and cure, the majority are subject to secondary changes, rendering the course unfavorable.

103 State Street.

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DISCUSSION.

DR. W. S. GOTTHEIL, New York—I have had a number of similar but more extensive cases under observation for a long time. The rather careful clinical and microscopic study to which I have subjected them would lead me to conclude that there is not so much difference between them as the elaborate nomenclature of their subvarieties would imply. It is a question whether classification is not rendered more difficult by the multiplication of Latin terms, of which our German colleagues

are so fond. Synthesis rather than analysis is what is now required, lest we lose our way in the terminologic forest. For ordinary purposes I recognize three varieties of sarcoma of the skin. The first is that slightly malignant, superficial growth called sarcoid by Boeck. The second is the localized sarcoma, either primary in the skin or secondary to sarcoma of other organs. The third includes the idiopathic, diffuse sarcomas, pigmented or white. In the present state of our knowledge of the subject I do not believe that variations in color, course, etc., justify us in subdividing maladies which are microscopically almost identical.

DR. M. B. HARTZELL, Philadelphia—I have just one word to say of the character of the so-called sarcoma cutis. Personally I have doubted whether all of these cases have a right to be called sarcoma; if so, then they differ from the surgeons' sarcoma. What the surgeons class as sarcoma is rapidly destructive and rapidly terminates in the death of the patient, but the so-called sarcoma of the skin frequently lasts for years. As has already been said by the previous speaker, the confusion in the use of terms is already great enough without adding new names. We ought to be slow to believe that all of the so-called sarcoma cutis is actually sarcoma. I recall a case that was exhibited at a clinical meeting of the American Dermatological Association as sarcoma in which there was simply extensive slate-colored discoloration of the skin extending to the sclera. We call many of these cases sarcoma because microscopically they look like sarcomatous tissue, but they are probably often something else.

DR. LIEBERTHAL—In reply to Dr. Gottheil I wish to say that in my paper there was neither an attempt made to multiply terms nor to introduce new ones. The long Latin name did not originate with me, but with Kaposi, and has since been accepted by the dermatologic world. Therefore, I have no apology to offer for repeating it before a body of dermatologists most of whom have a national as well as an international reputation and are familiar with it and its interpretation. As long as there is no better name suggested and accepted we do well to let the old one stand in order to avoid confusion.

Regarding the remark made by Dr. Hartzell, I would refer to the essay mentioned in my paper in which Kaposi defends his standpoint concerning the name applied by him to the first form. I did not attempt to solve the question of the place to be assigned to it in pathology, but only entered into the consideration of the similarities between the two forms.

Clinical Report.

SEVERE BRAIN INJURY WITHOUT FOCAL SYMPTOMS.

WILLIAM A. DAVISON, M.D.
BRIDGEPORT, CAL.

The Injury.—July 8, 1902, at 7 p. m., E. L., male, aged 27, had an iron bolt, with a one-inch square top on its end, driven by direct violence through the vault of the cranium. The bolt cut through his hat and scalp, crushing in at least one square inch of the frontal and nearly as much of the left parietal bones, carrying the fragments deep into the brain substance. A triangular piece of left parietal bone, one inch wide at its base and one and one-half inches long, was broken down and rested on the brain. The front edge of the wound was one and one-half inches in front of the coronal suture, a little to the left of the median line of the frontal bone, extending across the median line probably one-half inch, thence backward across the coronal suture into the left parietal about one inch. It thus made an oblong opening about one and one-half by two inches, with jagged edges.

The brain injury involved the superior portion of the first, second and fourth frontal convolutions, the ascending parietal, the superior parietal and probably the superior sylvian convolutions of the left side, the superior portions of the first frontal on both right and left sides, the superior portion of the ascending, and the anterior portion of the superior parietal lobes of both sides.

Treatment.—The course of the wound was slightly to the left. How deep the bolt penetrated I did not have the necessary curiosity to ascertain, but was satisfied to calculate by the size of the opening that there must be buried in the cerebrum the fragments of a section of bone measuring one and one-half by two inches. The conclusion was verified later. I irrigated and removed all visible bone fragments (save that of the left parietal) and such invisible pieces as were easily detected by gentle application of the probe. On removal of the pieces of bone, brain matter and blood clots came away. The triangular piece of the left parietal was elevated and left *in situ*. The bolt had not remained in the wound.

Receipt of the Injury.—No one witnessed the accident and the patient could not tell how it happened further than that he was leading a saddled horse under a wire clothesline attached at each end to a post—at one end by this iron bolt, which inflicted the blow. The clothesline caught under the pommel of the saddle. The post with the protruding bolt was broken off at the ground and hurled some feet away. The man was thrown to the ground, from which he was seen arising by his wife, who at this juncture happened on the scene. With her assistance he walked fifty feet to his bed.

Symptoms.—Hemorrhage was free but not excessive. There was some shock and for a time semi-consciousness; no loss of

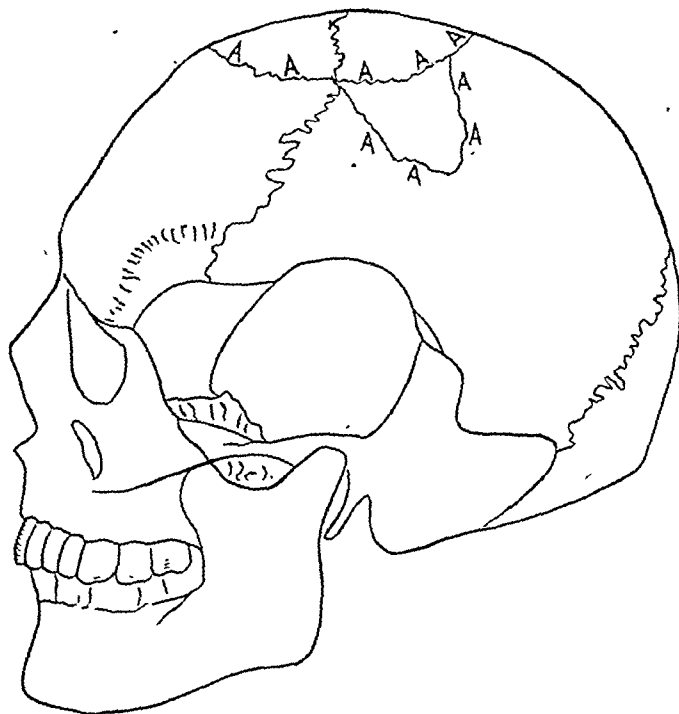


Diagram of injury. The lines marked A—A represent the skull fractures.

any of the senses. There was an indisposition to talk, but at all times he would speak if urged. There was also acute, lancinating pain in the front of the head, scanty secretion of urine and little desire to pass water for a day or two. I could not say there was paralysis, for the fluid being scanty and high-colored, I did not allow him to retain it longer than eight hours without use of catheter. The bowels were constipated, but yielded readily to purgatives. I did not consider the bladder or rectal torpor more than one often finds with active men confined suddenly to bed. There was no motor nor sensory paralysis at any time, in spite of the fact that he lost at least a tablespoonful of brain substance from the motor area. From beginning to recovery the temperature never exceeded 99.6. The pulse varied from 40 to 70 for the first ten days and was very weak. This was combated with 1/50 gr. sulph. strychnia hypodermically.

After about ten days the pulse rallied and gradually resumed its normal force and activity. There was no change in the pulse beyond its slow and weak action. The pupils were not markedly affected at any time, but for a day or two were probably not so sensitive to light as in the normal state.

After-Treatment.—For several days small pieces of bone presented themselves and were removed. Irrigation of hot borated water, borated gauze dressings and sulph. strychnia as indi-

ated constituted treatment; he was kept perfectly quiet and given liquid diet. Eighteen days after the accident the brain was granulating nicely, and there was a very light discharge of a non-purulent nature. At this time I closed one-third of the scalp wound with a deep silk suture. The mental condition was good, and the patient was doing well in every respect, which condition has continued. The surroundings were extremely unfavorable. From the beginning to the eighteenth day there was not a drop of pus and no antiseptic was used save borax. I was ably assisted throughout the case by Dr. J. H. O'Connor.

Why there were no more symptoms is the strange part of the case. Why the man did not die after such an injury is a surprise, and why he had so few symptoms of injury to the brain substance is a greater one.

Later.—At this writing (September 26) he is to all appearances in his normal health, with unimpaired senses and motor power, and intellectually unchanged.

New Appliance.

A NEW INGUINAL BANDAGE.

JAMES CHAMBERS PRYOR, M.D.

PASSED ASSISTANT SURGEON, UNITED STATES NAVY.

WASHINGTON, D. C.

Several years ago the writer commenced using a bandage which he originated—so far as he knows—and which has at times been called the "Pryor bandage."

METHOD OF APPLICATION.

Standing in front of the patient, and holding a strip of two or three inch roller muslin bandage, two and one-half yards long, and the dressing being in place, the bandage is applied as follows:

1. Apply the middle of the strip of bandage to patient's vertebral column at the waist.
2. Carry ends of bandage forward about the waist.
3. Holding the extremities taut, carry one end entirely around the other, making a "round turn" or an "elbow hitch." The result resembles an X with one of its component parts completely wrapped around the other.
4. After twisting it as described, carry the inner extremity inside and the outer extremity outside the thigh and unite the ends with a knot, safety pin or other appliance.
5. The dressing (which lies under the intersection of the arms of the X, if the bandage has been properly applied) may now be fastened to the bandage with safety pins, and the dressing is complete.

ITS USES AND ADVANTAGES.

As the writer has demonstrated the usefulness of this bandage in practice, in the U. S. Naval Hospitals at New York, Mare Island, Cal., Newport, R. I., and on naval vessels to which he has been attached, he feels that the above description may be of value to those who are using surgical dressings. It is not claimed that this bandage can wholly replace the time-honored and effective spica or figure-of-eight, but in many instances it may be substituted with a real gain in efficiency.

In applying fixed dressings it is not so efficient, but even here it may be used with splints. For checking hemorrhage it forms a most excellent method of compression. With a suitable pad it makes an excellent temporary truss, and at this writing it is being used in this manner on two patients on the U. S. Battleship *Massachusetts*.

It may be applied effectively with a smaller expenditure of material than any bandage known to the writer, the ratio being as one tour of a spica is to a complete spica. Therefore, where economy is a consideration it may be used to advantage. The ease with which it may be applied commends the bandage at once. Its application requires a minimum of handling of the patient. It may be applied as quickly as any known bandage. It is lighter and more comfortable than a spica, and it does not become so wet with perspiration as does a spica in hot weather.

For ambulant or convalescent patients this bandage is not so cumbersome and does not restrain their movements; there-

fore, it does not interfere with the performance of any light duty for which the patients are not otherwise incapacitated.

Although its application to the groin is the only one here described, its field of usefulness is by no means restricted to the inguinal region. When the principle has once become fixed in the mind its wide range of application immediately becomes apparent, and it is seen how it may be applied in retaining a dressing on a limb, the trunk, axilla, female perineum or genitalia, etc.

The simplicity of this bandage, the facility and rapidity with which it may be applied, and the small quantity of material required, seem to the writer to make it especially adapted to emergency work or to field and military surgery.

SUMMARY OF THE ADVANTAGES.

To briefly summarize, this bandage is 1, economical; 2, easily and quickly applied and with a minimum of incon-



venience to patients; 3, cooler than a spica and not so cumbersome; 4, applicable to many parts of the body; 5, a substitute for a truss in hernia; 6, an effective compress, and 7, especially adapted to emergency or military surgery.

U. S. S. Bancroft.

Raise the Standard of Fees.—A Western contemporary, the *Alkaloidal Clinic*, advocates a general agreement on the part of physicians to raise their fees in accordance with the enhanced prices of the necessities of life which have obtained of recent years. With some conditions and limitations we heartily vote aye to this resolution. The first condition would be that the fees of the physician are those that should be raised—the physician, we mean, as distinguished from the surgeon and the specialist. The internist, the general or family physicians, constitute the most important but the most neglected class of the profession. We have conspired with the thoughtless and melodrama-loving public to give all the honor and all the profits also to the surgeons and specialists. If the profession is to make any common stand for better wages, it must be for the sake of the general physician. His work is worth just as much as that of the operator, but he does not receive one-tenth, and in many cases, not one-hundredth as much. In the second place the movement to increase the fee should at first chiefly consider the country physician, as distinguished from the city man. Either because the number of cases is greater or other means of livelihood are obtainable the city physician does not suffer from low and uncollectible fees as does his country brother. The newly-aroused professional consciousness must show conscientiousness and the love of justice, or it will not endure.—*Amer. Medicine*.

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SATURDAY, DECEMBER 6, 1902.

THE HEALTHFULNESS OF COAL MINING.

A number of statements recently made in regard to the unhealthfulness of the miners' occupation suggest a reference to the authoritative utterances on the subject and to statistics. These do not exactly confirm the statements that have been made, and may be a surprise to some who have not investigated the matter. Naturally one would not expect the business of a coal miner to be an especially healthful one; the darkness in which he labors, the frequently constrained and unnatural posture, the dust, the gases and supposedly imperfect ventilation, the fumes of explosives, the dampness, etc., all readily suggest themselves as probable causes of physical deterioration and mortality. In old times the physical strain caused by climbing almost interminable ladders was also a matter to be considered. These factors leave altogether out of account the accidents to which the miner is exposed. It is not surprising, therefore, to most people that the recent testimony before the coal-strike commission should have been so positive as to unhealthfulness of the miners' life—it falls in naturally with their preconceptions.

When, however, we investigate statistics or consult authorities another aspect of the case is forced on us. Aside from accidents, coal mining is said to be a distinctly healthful occupation by those who have considered the subject. Thus Louis¹ says: "Coming lastly to the subject of the diseases of miners, it may first of all be stated that mining is a distinctly healthy occupation. The mortality of all males in Great Britain during the years 1890-92 was 18.74 per 1,000, out of which 0.87 deaths were due to accidents, leaving 17.87 per 1,000 due to what may be termed natural causes. On the other hand, the mortality among coal miners from all causes for the same period was 12.33, that due to accidents being given as 2.00, making the death rate due to natural causes only 10.35 per 1,000." He gives as reasons for this that there is a sort of natural selection at work, that those who find the work too hard drop out, and while the labor is arduous, it requires only steady, moderate exertion, the hygienic conditions in the (English) mines are generally good, the ventilation fair, the temperature equable, the miner is not exposed to the inclemencies of the weather and the place where he works is usually dry. The English coal miner, if industrious, he says, can always earn a wage ample

enough to keep him in fair comfort and to supply him with all the necessities of life. The inhalation of coal dust is irritating to the lungs to some extent and the constrained position in kirving or cutting under has its disadvantages, but these do not seem, in his opinion, to seriously counterbalance the hygienic advantages that otherwise exist. The English coal miners are far better off as far as health is concerned than the English metal miners as shown by statistics. One important cause of needless lung disease among them, he thinks, is their universal custom of walking home in their damp and dirty pit clothing instead of changing at the mine. Where conveniences for changing and bathing have been provided they have been always rejected.

We have not the corresponding authoritative figures and statements for the American coal miners, but we have the mortality statistics as given in the U. S. Census Reports (Vol. III, part 1, p. 154). Here we find that miners and quarrymen included together had a total mortality in 1900 of 5,895. Taking the four chief fatal disorders or classes of diseases we find the figures distinctly favorable to the miners. Thus they lost by consumption less than one-tenth of their total mortality as against over one-ninth among farmers and agricultural workers and over one-eighth among professional men, merchants, common laborers, and between one-sixth and one-seventh in manufacturing employes. Their proportion of deaths from pneumonia was about the same as that of agriculturalists and common laborers, and rather greater than that among most other classes of workers, while that from heart diseases and disorders of the nervous system was among the lowest in all occupations. Only in accidental deaths does mining industry have a specially bad preëminence, and here it is exceeded by the railway service, the percentages being 34 and 39 respectively of the total mortality. The small mortality from heart disease would not indicate any special prevalence of acute rheumatic affections, at least, during active life.

In Newsholme's "Vital Statistics," a standard British authority (1899), coal miners in Derby and Nottinghamshire stand high in the list as to expectation of life, being only surpassed by farmers, agricultural laborers, teachers, etc., but in Lancashire take a considerably lower place, a little below physicians and tailors and just above law clerks, butchers and printers. This would indicate a considerable difference in the conditions in the two localities, but in neither case is coal mining included among the most unhealthy trades. As regards special disease mortality the coal miners lead in bronchitis, of which, however, the aggregate mortality is small, while their loss from phthisis, the most fatal disease, is comparatively slight. A separate table is given of the ratio of mortality in occupations involving the breathing of dust-laden air, and in this coal mining and corn milling are bracketed together among the healthier occupations. Textile manufacturing, quarrying, iron and steel working are apparently much

1. "Dangerous Trades," recently published, edited by Thomas Oliver, M.D., the most recent standard work on the subject.

more dangerous from this cause, while cutlers and pot-
ters are at the worst end of the list.

The accidents of mining are, of course, a serious risk, but it appears from Louis' showing that they are largely avoidable. This is shown by the much lesser proportion in some countries than in others where the legal and other oversight is less strict and by their greatly lessened frequency with enforcement of precautionary regulations. In Great Britain they are apparently much less frequent than in the United States and are less common than formerly, while they are still rarer in Germany. There will always be, among any large number of working men, some reckless ones, and such can easily run up the accident list unless weeded out by the employers or by the general action of the others or constrained by rigidly enforced regulations.

It would seem probable, the miners' life being a laborious one, that it would cover only a certain number of the years of greatest vigor and that this would affect the statistics of mortality. To some extent this must be admitted, yet we find in the census mortality statistics nearly one-seventh of the deaths of miners are at 65 and over, and more than one-fourth over 55. As the mortality rate is not high, it would appear that while many continue at their occupation after middle life, a large number must go into other trades or retire altogether, like the bookkeepers, drummers, railway employes and clerks, who also show a proportionately small mortality at advanced ages. There are other employments that show a much greater mortality but still have a decidedly larger proportion at advanced ages.

It must be remembered that the mortality statistics of the U. S. Census include miners of all kinds, many of whom are engaged in much more unhealthy work than coal mining. They also include quarrymen, whose work, according to the English figures, is in some respects less healthful than that of the coal miner. It is unfortunate that we have not the data to exactly parallel these figures in this country and Europe, but it is quite possible that the results would not be materially affected. Taking it altogether the facts collected from all available sources seem to indicate, what we have hardly expected, that the occupation of coal mining is not either relatively or absolutely unhealthful as compared with the majority of other means of gaining a livelihood. It has its inconveniences and hardships and is exposed to special dangers from accidents, but these can be minimized by proper care, appliances and legal regulations. In Great Britain the mortality from coal mining from this cause is given by Newsholme as less than twice that in the general population. The special diseases to which miners are liable seem also to be largely preventable, thus greater care in changing the equable atmosphere of the mine to the extremes of heat and cold outside would probably reduce the proportion of respiratory affections, such as asthma, etc., that are now claimed to be incident to the occupation. These are the natural deductions from the data furnished by the authorities above quoted and which can not well be discredited.

AS TO ALCOHOL.

There are few problems of greater importance than the place that should be accorded alcohol as a beverage, a food and a therapeutic agent respectively. At the outset the question arises: Is the use of alcohol for any or all of these purposes on the one hand desirable, useful and free from danger, or, on the other hand, undesirable or unnecessary or even injurious; and the answer must be shaped from a knowledge of the physiologic actions of the substance in question. Now, so far as is known, alcohol belongs in the group of physiologic agents known as sedatives or narcotics, such apparent stimulation as it gives rise to being due rather to paralysis of inhibition. Alcohol is an irritant of tissue and, in sufficient amount and concentration, a protoplasmic poison.

As a beverage alcohol is unnecessary, as this purpose can be at least as well fulfilled by a number of other substances quite devoid of danger. The sense of well-being to which alcohol gives rise is due in part to loss of the sense of responsibility, and is therefore not to be lightly invited. Such value as a food or as a producer of energy or of heat as alcohol has is possessed by a large number of other substances incapable of harm, while the rapidity with which alcohol, when taken in moderate amounts, is consumed in the body is offset by the attendant interference with metabolism. As a therapeutic agent alcohol will find its indications when its physiologic effects are desired, and these can not be better induced, or with less danger, by any other means.

This entire subject has received generous and frequent discussion in recent years, and it would appear from the published communications bearing thereon that the view as to the inutility of alcohol for many of the objects for which it has long been employed is gaining increased acceptance. The November number of *The Practitioner* contains a symposium by distinguished English authorities on various aspects of the use of alcohol. The editor's own attitude appears to be one of tolerance or neutrality. In the opinion of Sir Samuel Wilks, who has himself used wine moderately as a beverage, alcohol is a good medicine and an important article of diet, but he holds that the circumstances and the limitations of its employment should be determined by the medical man. Sir Henry Thompson relates that early in life he personally secured relief from hemicrania and rheumatism by abstinence from alcohol. On attempting, at the age of 75, to resume the use of wine he found the effect to be unquestionably injurious. Sir Wm. Broadbent insists that alcoholics should be regarded as medicines and prescribed with the same care and in the same definite way as the most powerful remedies.

In discussing the pathology of alcoholism Dr. G. Sims Woodhead points out not only that the excessive use of alcohol induces cirrhotic changes in kidney and liver, but also that pneumonia, for instance, in alcoholic patients assumes a most virulent form and often ter-

minates fatally, marked fatty degeneration being found in various organs, and that a history of alcoholic indulgence is often an antecedent factor in the etiology of a number of diseases of the nervous system. The deleterious effects of alcohol are due to interference with nutrition and to gross degeneration of cytoplasm. These are most marked perhaps in the fibers of the heart muscle, but in advanced cases they appear also in the muscular coat of the blood vessels, in the liver cells and sometimes in the excretory cells of other organs. Fibrosis and calcification may result as secondary changes. Furthermore, it has been demonstrated that indulgence in alcohol predisposes to infection and that alcoholics attacked thereby resist its ravages less well than do abstainers. Dr. Woodhead always has been an abstainer, and he has found that as an athlete, as a student and as a worker he has been able to accomplish the tasks that have fallen to him with as little effort as his fellows, if not with less effort.

After pointing out the truly enormous annual expenditure for alcoholic beverages in the United Kingdom, together with the resulting pauperism, crime, destitution and disease and the losses in labor and due to accident, etc., Dr. Jas. Edmunds cites the experience of the United Kingdom Temperance and General Provident Institution, which for more than fifty years has insured abstainers and non-abstainers in separate departments. It has been found that the number of deaths expected, the number that actually occurred and the policy claims paid were all more than 25 per cent. greater in the case of non-abstainers than in that of abstainers. Furthermore, the statistics of the registrar-general for England and Wales show a much higher mortality among persons engaged in occupations that favor indulgence in alcohol. Testimony of an allied character is presented by Dr. J. J. Ridge and Mr. Francis Vacher. As to the part that alcohol plays in surgery Mr. Pearce Gould holds that it is altogether an injurious one. Mr. J. Milne Bramwell cites the results obtained in the treatment of 76 cases of dipsomania and chronic alcoholism by means of hypnotic suggestion. Recovery ensued in 28 cases, improvement in 36 and failure in 12.

As will be seen, the symposium in *The Practitioner* constitutes a strong document in favor of temperance, if not abstinence, with respect to the use of alcohol. Whatever the measure of doubt or uncertainty in which the question is involved that attitude would appear to be at least a safe one. It will not be contended that alcohol is necessary as a beverage or as a food, and it can therefore be dispensed with for such purposes. As to its therapeutic employment, there may be reasonable difference of opinion, and we may wait for further evidence, but at this point before reaching a final conclusion.

he works is **TUBERCULOUS CERVICAL ADENITIS.**

industrious, by Dr. Freeman in the present number of

1. "Dangerous" AL appears especially timely, since various

writers have recently advocated earlier and more radical operative measures in the treatment of tuberculosis of lymph glands. Tuberculous cervical adenitis is a disease which comes under the physician's care with relative frequency, being especially prevalent among city children with unhygienic surroundings. Swelling of the cervical lymph glands is common in children as a sequel to various inflammatory processes in the nose, pharynx, mouth, tonsils, ears and scalp. The swelling may immediately follow a single acute disorder, but it is frequently due to repeated slight inflammations and chronic catarrhs of the nasopharyngeal mucous membranes. Such enlarged glands tend to disappear, as the child becomes older. If tubercle bacilli gain entrance to these enlarged glands, they find favorable conditions for multiplication, and tuberculous adenitis is often implanted on a previous benign swelling. It is most likely that the tubercle bacilli usually enter the glands through the lymphatics which pass from the inflamed mucous membranes above mentioned, and since typical tuberculous ulcerations are rarely found at these points it has been assumed that the bacilli pass through the mucous membrane or through trivial wounds without causing any tuberculosis at the place of entrance. The disease usually progresses so slowly and terminates in spontaneous recovery in so many cases that it is often difficult to know what is best to be done in regard to treatment. In every case the patient should be given the advantage of the best hygienic surroundings. Tonics, cod liver oil, creosote, etc., should be administered for their general effects. Any local disease in the nose, throat, etc., should receive appropriate treatment. The application of iodine and other irritants to the skin overlying the glands is to be condemned; no good results follow such measures and they seem to do harm by encouraging inflammations about the glands. Injections of various antiseptic substances have also been found to exert no favorable influence, and they sometimes appear to render subsequent removal more difficult. If the glandular changes are limited, the enlargement being comparatively moderate and showing no tendency to break down, the general advice is to watch the progress of the disease in the glands, and to make every effort to improve the general condition of the patient. If the disease shows a tendency to progress, especially if the enlargement has attained considerable size and persisted for some time, operative measures must be instituted.

The surgical treatment of tuberculous cervical adenitis has been gradually elaborated during the past twenty years. In 1893 the subject was discussed at the meeting of the British Medical Association, and Allbutt, Teale and others urged more general operative treatment in this class of cases. Teale declared "the ugly scars and unseemly depressions, once so familiar in scrofulous necks, should be deemed an opprobrium of surgery; whilst to delay operation until the skin is

thin, red and ready to break down, or has already given way, should be looked on as mischievous trifling." The operative treatment advocated at that time consisted largely in incising and scraping caseating glands, and many were inclined to adhere to conservative measures as long as possible, leaving surgical interference as a last resort. In 1899 W. Watson Cheyne,¹ in the Harveian Lectures, strongly advocated complete removal, not only of the very large and caseating glands, but also of all adjacent glands which are not perceptibly enlarged, together with the surrounding fat, and all tissue involved by extension. Whenever the tuberculous mass could not be satisfactorily separated from the internal jugular vein, he advised the removal of a portion of the vein between two ligatures. This latter procedure he found necessary in all cases in which there were sinuses, and practically all cases in which suppuration was present. The highly satisfactory results of such radical operative treatment of tuberculous adenitis in the hands of the leading surgeons have led to a more general adoption of similar measures. The recent publications by Parker² and Mitchell³ indicate that experience with extensive material impresses the observer with the value of thorough operative removal of all infected tissues in these cases. Parker urges more frequent and thorough operation in the milder cases, thus reducing the number of advanced and extensive cases calling for treatment.

While tuberculous cervical adenitis is primarily a local disease, and not extremely serious nor rarely proving fatal in itself, it bears a certain definite relation to pulmonary tuberculosis, and tuberculous glands are a constant danger, being a source from which tuberculosis may spread. Permanent recovery follows proper removal in over 70 per cent. of cases, and tuberculosis of the lungs, after complete removal of the glands, is comparatively rare. There is no doubt that operative treatment in these cases should be instituted early, at a time when removal can be effected with comparative ease, and that the excision should be radical in all cases.

THE STUDY OF PALSIES.

A review of the large and increasing statistics of infantile palsies applying for treatment in the metropolitan clinics of children's and nervous diseases shows plainly that the cause and prophylaxis of these disorders are in need of more minute study. The morbid anatomy and the manner of production of the spinal type is fortunately well known from the more recent work of Semering, Goldscheider, Medin, Strümpel and Zuppper, but its minute pathology and pathogenesis are still in doubt.

A question still under discussion is, are they primarily parenchymatous or vascular in their inception? The general trend of modern research is in favor of the latter theory, while the secondary changes are consid-

ered to be interstitial and parenchymatous. Opinions appear about equally divided between the theories of the autotoxic and organismal cause of the primary lesion, but the force of its epidemic occurrence is in favor of the latter.

While preventive medicine seems on the eve of triumph in the spinal type of palsy, it is far distant in the cerebral form. Here the problem is a disheartening one. Spinal architecture and function is now well known, but that of the brain is in its infancy. The nature of the earliest changes in cerebral palsy is especially obscure, notwithstanding its terminal pathology is quite clear. The thrombophlebitic, interstitial and hemorrhagic changes are all secondary to an infectious element. Muratow,¹ in his recent work, strongly contends for the non-suppurative parenchymatous character of the lesion. The author particularly insists on the para-infectious nature of the disease process. From clinico-pathologic data he believes it is shown to be due to a toxin, not to an infectious organism itself. Coincident to this work we find the encephalopathy type of lesion is still urged by Strümpel, and that this belief is current in German medicine, and furthermore. Strümpel's assistants have but recently found new facts to substantiate the original contentions of their chief.

Detail studies in the cerebral palsies, especially on athetosis and allied disorders of motility which follow in the wake of the original lesion, appear from time to time and are of considerable interest. For a number of years it has been known that rare cases of paradoxical pseudo-hypertrophy may occur in cerebral palsy, but this has rested on the rather slender argument that the choreic paresis present causes the hypertrophy by agitation of the partly paralyzed parts. The recent review of the matter with report of five new cases made by Clark² has also shown that epilepsy may accompany or replace athetosis, but this hardly explains the hypertrophic state of soft and bony parts of the trunk, not in agitation either in athetosis or epilepsy, as recorded by the older French writers.

It has been conclusively proven by Batten that the muscle spindle has no other than sensory functions, and that it suffers no material alteration in brain or spinal palsies in children. We must, therefore, look to the nature of the cerebral lesions for an explanation of all the phenomena attending these paralytic disorders. The importance of being able to diagnose the seat, nature and degree of brain damage is rightly emphasized by Clark. But before we shall be able to do this to any degree of satisfaction a more exact anatomy and physiology of the brain, and especially of the cerebral cortex, must point the way.

CALIFORNIA STATE JOURNAL OF MEDICINE.

Volume I, No. 1, of the *California State Journal of Medicine* is just received. It is the journal of the Medical Society of California, and will be issued monthly in

1. Brit. Med. Jour., Dec. 16, 1899, 1659.

2. Brit. Med. Jour., Oct. 25, 1902, 1312.

3. Johns Hopkins Hospital Bulletin, July, 1902, 161.

1. Monatschrift für Psychiatrie und Neurologie, May, 1902.
2. Journal of Nervous and Mental Diseases, November, 1902.

place of the annual transactions. In the editorial announcement we read:

"The Journal will be the partisan of no one and nothing, save only and always an energetic partisan for honest, legitimate, ethical practice of the regular profession, for truth and right, and, first, last and all the time, for organization, and again organization, of the regular profession of California into a united body—the State Society."

The first number is a credit both to the editorial committee and to the Medical Society of the State of California.

RECOMMENDATIONS FOR THE NAVY.

The report of the Surgeon General of the Navy contains, besides the usual matter, one or two propositions worthy of special note. One is the recommendation of the provision for a corps of female nurses to act in the large naval hospitals. Army experience has shown the advantages of such a corps, and there ought also be occasion for their services on hospital ships. It would also relieve the hospital apprentices now employed, for sea service, as the Surgeon General suggests. The military female nurse appears to be a permanent institution in the Army, and there is no good reason why her services should not be secured to the naval branch of the service. Another suggestion, though without formal plans, recommended is that of a naval tuberculosis sanitarium, thus also profiting from the Army experience. The bureau has the subject under consideration and hopes to be able to offer definite plans in the near future. The need of increase of the medical corps of the Navy is emphasized, as the work has increased and the present law does not provide for a sufficient number of medical officers. There are no vacancies and the corps is undermanned and overworked. It is a proper subject for the consideration of Congress, as with our naval increase there should also be a corresponding increase of the medical corps or the whole body will suffer. Naval line officers do not always appreciate their own needs in this respect, but it is to be hoped that their influence will also be exerted for the Surgeon General's recommendations. Our new Navy should be a model one in its medical as well as in all other departments.

THE MECCA PILGRIMAGE.

It is an evidence of the advance of modern medicine and the benefits that it has conferred on mankind that the epidemics that were so fatal even a few decades since are now little to be feared by civilized communities. Thus cholera, which raged in the United States and Europe even later than the middle of the nineteenth century and only eleven years ago in the city of Hamburg, now gives little concern to sanitarians, as we know how to avoid it, even in the centers of its prevalence. There are good reasons, nevertheless, why we should not neglect precautions; there are many, even in the most highly civilized communities, who from their habits and prejudices can furnish food for epidemics of even the most preventable diseases. It is therefore not a matter of indifference to us, aside from all general humanitarian considerations, that cholera rages in Egypt or

Eastern Asia, and anything that can be done to prevent its continuance should not be neglected. It is to be presumed that in the Philippines, India, China and Japan all that can be done with the material of their populations is being done, but in the nearer East the case may be different. The Mecca pilgrimage has always been the disease breeder and disseminator *par excellence*, but fear of stirring up religious fanaticisms has heretofore kept Europeans from interfering with it except in a very partial and inefficient way. Now that we know better how to control the disorders that have heretofore been formidable as epidemics, the question arises whether it is not an urgent duty of the powers that have most to do with this, as rulers of adjacent territories or of those that furnish the pilgrims, to take up the matter and either enforce needed sanitation or, if necessary, even stop the pilgrimage. The latter step would, of course, be only one of last resort, but its possibility should be considered. It is useless to expect any Moslem powers to take the matter up, and their promises are worth nothing. In the meantime cholera is devastating Egypt and other Mohammedan countries and the dangers of its extension are always present. Though most civilized countries will escape, the present state of affairs is the cause of hundreds of thousands of needless deaths and an interference with commerce and the world's progress. The Mecca pilgrimage, as conducted, is an ever-present annual peril to the welfare of the world.

THE FOOTBALL MORTALITY.

The football season is now over and leaves behind it a very respectable record of casualties, enough to supply a respectable Spanish-American war, and only second to the Fourth of July mortality. Thus far the returns give 12 deaths, several fatally injured and over eighty seriously injured, smaller items, such as sprains, bruises, torn ears, loss of teeth, etc., not enumerated. The query whether the game is worth all this naturally suggests itself. There is something in most of us that makes danger a sort of relish to our pastimes, and it is perhaps to this barbaric element in our natures that some of the world's progress is due. Professionally, however, we can not approve of anything so unsanitary even in a purely traumatic way, and it would seem that something might be done by those in charge of college athletics at least, to modify the roughness of the game and somewhat reduce its risks. Among the serious casualties of the game this year we have fractured skulls, injured spines, brain injuries resulting in insanity, as well as broken legs, ribs, collar-bones, etc. To be a cripple or lunatic for life is paying high for athletic emulation. Besides this, there is another side of the question, a moral one that deserves consideration. There is what one may call "dirty football." We hear of slugging players, of those that directly aim to injure players or aggravate existing injuries so as to disable them, and the umpires do not seem to consider this a sufficiently serious matter. The reports of casualties give plenty of evidence of this; we have the records, "kicked in the head," "stabbed in the back," among the other injuries reported, showing that the game is made absolutely murderous at times. It is hard to speak mildly of such outrages, but if the rules were made and en-

forced that any "dirty work" lost the game to the side indulging in it or even severely penalized it, much good would be done. At present it almost appears that football authorities condone this sort of thing, and certainly they do little to show that they are not willing to profit by it. There is little difference in this from criminal manslaughter or murder if death should result, and all who do not actively discourage it are more or less responsible. It may be that we must have more or less unavoidable risk in football, for it is a rough game, but brutality is utterly needless and deserves the severest condemnation and condign punishment. There is no use of making a rough game a murderous one.

Medical News.

CONNECTICUT.

Personal.—Dr. Walter L. Lay, Norwich, will practice in Middletown; his successor at the Backus Hospital as senior house physician is Dr. F. A. Emmett, and the vacancy caused by the latter's promotion has been filled by Dr. David Getchell, Oldtown, Me.

Physician Fined and Appeals.—Dr. Anthony J. Hill, Torrington, charged with having practiced medicine without registering or taking the examinations requested by the state law of 1897, was found guilty, November 19, and fined \$100 and costs. He took an appeal to the Superior Court. Dr. Hill has long been a resident of Torrington, but some time ago gave up his practice to a considerable extent. About a year ago he commenced active work again.

Smallpox.—From the report of the Connecticut State Board of Health, we quote the following:

One of the most notable facts relating to the health of the state during the past year, was the widespread prevalence of smallpox. Cases were reported from 34 different towns, including every county in the state.

In only a few places did it assume the character of an epidemic, although regarded as the most contagious of all diseases.

In two ways these outbreaks gave testimony to the protective power of vaccination: 1. Connecticut, one of the most densely populated states and in intimate relation with the rest of the country, was slow to entertain any cases of the disease. This exemption can be explained only because so large a proportion of the inhabitants have been rendered immune by vaccination.

2. The spread of the disease has been almost wholly among those who were never vaccinated, or who were vaccinated so long ago, that its protective power had been impaired by time. In still another way its value has been verified, by the prompt arrest of the spread of the disease wherever a general vaccination has been practiced.

There were 323 cases reported during the year ended October 1, of which only 22 were fatal, giving the surprisingly low death-rate of 6.8 per cent. In all the literature there is no record of an epidemic of so mild a type.

In the three largest cities in the state, where general vaccination is observed, there were only 16 cases.

ILLINOIS.

Jo Daviess County Loses Suit.—In the case of Dr. George A. Staples et al. vs. the County of Jo Daviess, for services rendered a poor patient of East Dubuque, the jury found for the plaintiffs and awarded \$500 for services rendered. The original bill was for \$300 but this the county board of supervisors refused to pay, and offered to settle for \$150.

Suicides.—Native Illinoisians do not often commit suicide. Out of 35 who killed themselves in Chicago, 19 were foreigners and 12 were natives of other states. Cook County has the greatest number; St. Clair County, which has a certain proportion of the St. Louis suicides, ranks second; Sangamon County, third; Peoria County, fourth, and Vermilion County, fifth.

Chicago.

Funds for Hospitals.—The will of the late Mathews Gottfried bequeaths \$2000 to the Christian Brothers' Hospital; \$3500 to Mercy Hospital, and \$2000 to the German Hospital.

Need of Children's Hospital for Contagious Diseases.—In its latest bulletin the department of health calls attention to the need of a hospital for children ill with contagious diseases, and cites a distressing case in confirmation.

X-Ray Suit.—Suit has been begun by John Bortoli against Northwestern University and Lakeside Hospital for injuries alleged to have been received during the course of treatment

at these institutions with the x-ray; \$12,000 damages is claimed.

Convalescent Home Opened.—A home for convalescent women was opened at 521 West Adams Street, November 22. It will accommodate thirty, and is designed to provide a home for women discharged from hospitals before they are fit to take up their work again.

Suit for Consumption Treatment.—A suit has been entered in the Circuit Court by Frank B. Pease, executor of the estate of the late August Dahlin, against Drs. John B. Murphy and August F. Lemke, for \$25,000 damages. The main allegation of the plaintiff is that a treatment described as the nitrogen monoxid gas method, which it is claimed was invented by Dr. Murphy and applied to Dahlin by Dr. Lemke, materially shortened the life of Dahlin.

Deaths of the Week.—During the week ended November 29, 448 deaths were reported, corresponding to an annual death rate of 12.83. There were 12 fewer deaths from all causes reported during the week than during the week before, and 25 fewer than in the corresponding week of 1901. The significance of this decrease is in the number of deaths (ten) under 1 year of age, and in that (fourteen) under 5 years of age. It is an axiom among sanitary authorities that the death rate under 5 is the best test of the sanitary condition or of the sanitary administration of a locality. Only the increased number of deaths from violence, including suicide, prevents the death rate of this month from being the lowest November mortality rate on record. There were 37 violent deaths reported during the week, as against 25 during the corresponding week of last year. Pneumonia caused 50 deaths; consumption, 40; cancer, 27; diphtheria, 21, and typhoid fever, 19.

False Death Certificates Spread Contagion.—The Department of Health comments as follows on a practice which is alleged to be growing, of the issuance by certain physicians of false death certificates in case of death from contagious diseases:

Another and more culpable, even criminal, cause of the spread of contagion is being investigated by the health department, with a view of presenting the evidence to the medical organizations of the city and to the State Board of Health, which latter body is charged with the enforcement of the medical practice act. This cause is the growing practice among certain physicians of the baser sort of giving certificates of death from contagious disease, in which certificates some non-contagious disease is falsely assigned as the cause. This is done usually at the request of the family, who wish to evade the restrictions of the health department in contagious disease funerals.

The Registrar of Vital Statistics reports to the commissioner that "We have had numerous complaints from undertakers that certain physicians were practicing this deception to a considerable extent, but up to date we have been able to verify only these two cases. We have pressed our preventive work so far as we can with undertakers without having the co-operation of the attending physician. We can control an undertaker, but not a physician. The situation is particularly grave at this time, inasmuch as diphtheria is endemic in this locality—the district south of the C. B. & Q. R. tracks and west of Center avenue to California avenue. The cases of diphtheria reported from this immediate neighborhood began in June with 1; then no other case until August, when there was 1 more; in September 3, in October 15 and in November 22, making a total of 42 cases—over half the total number occurring within the last month. There is no telling how many cases have been concealed, nor how many funerals of contagious disease deaths have been conducted without the supervision of the department for the enforcement of preventive measures against the spread of contagion; but it is evident from this rapid increase of diphtheria—out of all proportion to the increase in other portions of the city—that there is need of greater authority over a certain class of certifying physicians than the department now possesses."

INDIANA.

To Add to College.—The Medical College of Indiana, Indianapolis, has purchased 50 feet of additional frontage on which it will erect an addition to the present college building.

Hammond Board of Health Organized.—The Hammond Board of Health has been organized with Dr. Preston G. Ihach, president; Dr. Cyrus W. Campbell, secretary, and Dr. Thomas W. Kohr, inspector.

Physicians in Indiana.—According to the annual report just published by the State Board of Medical Examination and Registration, there are 5880 physicians in Indiana, of whom 685 are in Marion County.

Indictments for Body Snatching.—The grand jury for the July term of the Marion County Criminal Court has returned indictments against six of those alleged to have been concerned in removing corpses unlawfully, selling them to various medical colleges, and aiding and abetting in the concealment of the corpses.

Charges Against Physicians.—Charles Soultz has entered suit against Dr. Aldine J. Dooley, Marion, for \$5000, alleging

that by the defendant's negligence and lack of skill, the plaintiff received permanent injury to his sight.—Dr. Donald M. Kelley, Brookston, has been sued for \$10,000 damages by Bertha Garrett, who alleges that the defendant attended her for dislocation of the shoulder, and that by his unskilful treatment she was rendered a cripple.

KANSAS.

Personal.—Dr. John D. Freeman has returned to Topeka after six months of study in Europe.

Patient Wins Damage Suit.—In the suit brought by Mrs. Mary Collins for \$3000 damages for alleged malpractice in the setting of a broken arm and shoulder, against Dr. W. H. Mauser, Burden, the jury found for the plaintiff and assessed the damages at \$650.

KENTUCKY.

Louisville.

Health Commissioner's Annual Report.—In his annual report Dr. Maverell K. Allen calls attention to the low death rate of 16.32 per 1000. Among the reforms suggested are additional public bath houses, more sewers, another garbage crematory, and the free distribution of antitoxin. Great stress is laid on the necessity for regular medical inspection of the public schools where the conditions are favorable to the spread of contagious diseases.

St. Joseph's Infirmary.—The golden jubilee of this institution was celebrated November 29. This institution grew out of the old orphans' asylum, established in 1837, on Jefferson Street, and moved to its present location in 1852. Some of the sisters on duty have been at the infirmary for twenty years. The first patient was received Dec. 2, 1852. Among those who have attended patients at the institution have been Drs. Samuel Gross, Erasmus Force, Henry Miller, Austin Flint, Lewis Rogers, T. S. Bull, and David W. Yandell.

War on Milk from Distillery Fed Cows.—The health officer has begun war on the dairymen who feed distillery slop in violation of the city ordinance prohibiting its use. Three dairymen have been indicted in the city court and the Dairy-men's Protective Association has issued a card claiming that "milk yielded by cows fed on distillery slop is of healthful quality, rich in butter fats; in fact, as good or better milk than is produced by cows fed exclusively on dry feed." They claim that the tests of the health department prove this fact, that they feed slop with other feed and submit it to a heat of 160 degrees before it is fed, and that there is no alcohol in the material. The health department is seriously considering the advisability of publishing the names of the dairymen licensed to vend milk in the city and what material is used by them for feed.

MARYLAND.

New Hospital at Cambridge.—Plans for the United Charities Hospital at Cambridge provide for a building with 40 rooms, at an expense not over \$30,000. It is proposed to build on the East Cambridge site.

Approve State Care of Indigent Insane.—At the semi-annual meeting of the Medical and Chirurgical Faculty of Maryland, held at Laurel, November 18, the faculty gave its approval to the state care of the indigent insane, and a motion was adopted that a committee be appointed to take the matter under consideration, and report a plan at the annual meeting for approval and submission to the legislature.

Personal.—Dr. John Ridout has been elected physician to the Charities Association of Annapolis.—Dr. James H. Jarrett celebrated his golden wedding at Towson, November 16.—Dr. Samuel Chase DeKrafft, major and surgeon, U. S. V., who has been serving with the Army in the Philippines for several years past, has been honorably discharged from the service and will return to his former home in Cambridge, Dorchester County.

Baltimore.

Will Entertain Lorenz.—Dr. Adolf Lorenz is expected here this week, and arrangements are being made to give him a warm reception. He will be the guest of the Johns Hopkins Hospital.

Accident to Professor Abel.—Dr. John J. Abel met with an accident at the physiologic laboratory of the Johns Hopkins Medical School, November 21. A bottle of amyl-nitrite exploded, cutting one of the tendons of his right hand and making him very ill from the fumes.

Prospects of the University.—Dr. Eugene F. Cordell addressed the senior class of the University of Maryland, Novem-

ber 22, on the "Past History, Present Needs and Future Prospects of the University." A strong movement is being made by the alumni and friends of the university to reorganize it on a better basis, and to push forward the endowment scheme. Extraordinary efforts will be inaugurated in the near future to raise a large endowment for the centennial which will occur in 1907.

Personal.—Surgeon H. R. Carter, U. S. P. H. and M.-H. Service, Baltimore, has been detailed as representative to the sanitary conference at Cairo, Egypt.—Dr. Ira Remsen of Johns Hopkins University was elected president of the Association of Colleges and Preparatory Schools of the Middle States and Maryland, which met in Baltimore November 16.—Dr. Jennie N. Browne has been appointed assistant medical agent for the South Baltimore District for the treatment of women and children.

Alleged Wrongful Registration.—On complaint of Dr. Eugene McE. Van Ness orders were signed, November 21, requiring Drs. Herbert Richardson, J. Thomas Nelson, William Caspari, Jr., Arthur W. Smith and John Thomas Avery to show cause by December 6 why their names should not be stricken from the register of physicians and surgeons duly qualified to practice medicine in Maryland, kept in the office of the clerk of the Superior Court. It is alleged that the physicians named were wrongfully registered without first having obtained a license from one of the boards of state medical examiners.

Institution for Feeble-Minded.—Plans have been completed for the administration building of the Maryland Asylum and Training School for the Feeble-Minded near Owings' Mills, Baltimore County, and construction has already begun. It is to be the central figure of a group of which two, a cottage accommodating 75 children, and a school building, have already been built, and will have a frontage of 100 feet with wing extensions from each end to the rear, 63 feet deep. It will have accommodations for the superintendent and his family, executive offices and sleeping rooms for teachers and assistants. At the rear, and connected with the various buildings, with inclosed corridors, will be a kitchen and refectory building. The buildings are being constructed of white limestone, and will cost \$50,000.

MICHIGAN.

Typhoid at Prison.—There is said to be an epidemic of typhoid fever at the state prison in Jackson, where 22 cases have occurred.

Tried for Sending Obscene Letters.—"Dr." J. R. Krauth, Cadillac, plead guilty to the charge of sending obscene letters through the United States mail and was sentenced to pay a fine of \$200, or in default to go to jail for 90 days. He paid the fine.

Personal.—Dr. George R. Pray, Ann Arbor, has been appointed physician to the state prison at Jackson, vice Dr. William A. Gibson, resigned.—Dr. G. Parker Dillon, formerly of Grand Rapids, acting assistant surgeon, U. S. Army, has been seriously ill with Malta fever, and has returned to the United States.

Michigan Mortality.—There were 2360 deaths reported during October, a decrease of 188 deaths from the preceding month. The death rate was 11.4 per 1000 population per annum, as compared with 12.6 for September. There were 470 deaths of infants under 1 year; 181 deaths of children aged 1 to 4, and 607 deaths of individuals more than 65. Important causes of death were as follows: Tuberculosis, 162; typhoid fever, 84; diphtheria, 73; scarlet fever, 19; whooping cough, 13; pneumonia, 149; diarrhea and enteritis, under two years, 130; cancer, 104; accidents and violence, 188. A decrease was shown in the mortality from tuberculosis, whooping cough and diarrheal diseases from the preceding month, and an increase in the deaths from diphtheria and pneumonia. Two deaths from smallpox were reported.

MISSOURI.

State Tuberculosis Sanatorium.—The St. Joseph Medical Society, at its meeting, November 12, unanimously adopted resolutions favoring the establishment of a state tuberculosis sanatorium.

Personal.—Dr. Joseph F. Robinson, Nevada, has been elected non-resident lecturer in the medical department of the State University.—Dr. Louis C. Fuller, Kansas City, is seriously ill as the result of a cerebral hemorrhage.—Dr. Edward B. Clements, Macon, has been elected to the state legislature.

Condemn Congulant Clarifiants.—The committee of the St. Louis Medical Society appointed to investigate the water problem of St. Louis, in its report unhesitatingly condemns the use of alum or any other coagulant to clarify the city's water supply. Resolutions were adopted which condemned any attempt to purify the water supply by chemical means, and urged that the water be procured from sources that are naturally pure.

NEW JERSEY.

Personal.—Dr. Frank C. Katherman, Atlantic City, has been appointed surgeon for the Pennsylvania system at Altoona, Pa.—Dr. Frank Devlin, Newark, has been appointed visiting surgeon to St. James' Hospital.

Typhoid in Trenton.—An epidemic of typhoid fever in Trenton is feared. The health officials are said thus far to have found no specific source of infection. Many cases are in hospital and many more suspected individuals are under observation.

Osteopath Fined.—E. M. Herring, Asbury Park, an osteopath, has been fined by Judge Heisley of the Monmouth County Court \$100 and costs, for unlawful practice of medicine. The judge held that the application of hands in the treatment of a disease was a remedy in the same schase as the application of drugs. This is the first case of the kind in the state. The medical law has been sustained by the Court of Errors and Appeals in all cases heretofore tried for unlawful practice.

William Pierson Memorial Banquet.—The William Pierson Medical Library Association at Orange celebrated by a banquet, November 12, the conclusion of its highly successful first year. Profs. A. Jacobi, M. Allen Starr and Dr. J. H. Huddleston were present and delivered addresses. The Hon. Frederick Adams delivered a eulogy on Dr. Pierson. The association now has about 80 members, has a library of 1500 volumes, and a fund of more than \$5000 donated by Dr. Pierson's widow, the income from which will be devoted to keeping up the supply of books for the library. Steps have been taken to increase this fund and also to establish a fund from which the expenses of medical lectures to be given by the best medical and scientific men before the association shall be met.

NEW YORK.

Opposition to Coroners.—The movement against the medical office of coroner has received a new impulse by the appointment of a committee from the New York County Medical Society to investigate and report on the advisability of reorganizing or abolishing the coroner's office. This committee consists of Drs. William M. Polk, J. Winters Brannan and Frank Van Fleet.

Increased Appropriation for Insane.—It is expected that the State Commission in Lunacy will request the next legislature to increase its appropriation for next year by at least \$500,000. The total appropriation for the care of the insane in 1902 was \$4,165,886.66, which was \$340,000 less than the appropriation for 1901. The commission, however, had on hand a large balance and this was utilized last year. This year there is no balance, so an increased appropriation is necessary.

Negroes and Cocain.—William H. Johnson of the Bureau of Labor and Charities has called on the citizens of Syracuse to alleviate the condition of a large percentage of Syracuse negroes. He states that every crime committed in that city in the past two years has been committed by a cocain fiend. He charges this increase to the looseness of druggists who sell the drug openly. Many normal school graduates among the negroes have become addicted to the drug, and there are many who have had to leave school.

Defense of the Accused Eddyites.—In the recent argument on the demurrer to the indictments at White Plains, so many new and interesting legal points were raised by the Eddyites that Judge Platt requested the lawyers to submit briefs. The chief contentions of the defense are: That under the constitution the members of the Eddyite Church have a right to liberty of thought and the use of their faculties; that there is no law which compels medical attendance, and that there is no law compelling a parent to give his or her child drugs.

New York City.

Thousands Offered for Hospital.—Four persons have each promised to the New York Post-Graduate Hospital \$25,000 if the hospital association of the institution shall succeed in raising \$100,000.

Regarding the Late Dr. A. M. Phelps.—At a meeting of a committee of the City Hospital Medical Board, November 22, resolutions were passed expressing regret at the untimely death

of the late Dr. A. M. Phelps, who was for more than thirteen years visiting surgeon to the institution.

Personal.—Dr. Ogden C. Ludlow has been appointed visiting physician to St. Joseph's Hospital.—Dr. Gertrude N. Light has been appointed a sanitary inspector.—Dr. Clinton H. Catherwood, who has been absent in the West for some time because of ill-health, has resumed practice.

Home for Nurses.—As a result of plans prepared by friends of the New York Hospital, the graduate nurses of this institution are to have a clubhouse and home. The building, including the purchase of a tract of land centrally situated, will cost \$300,000. The building will accommodate 130 nurses.

New Hospitals Opened.—St. Bartholomew's Clinic, under the charge of Dr. Sinclair Tousey, has moved into its new building erected by the munificence of Mrs. Joseph C. Hoagland of Brooklyn, who not only bought the site and erected the building at a cost of \$300,000, but also agrees to assume the expenses of its maintenance.—The new Bradford Street Reception Hospital, where all East New York emergency cases will be treated, was opened November 24.

Fined for Infractions of Law.—Dr. Agnes Karlstoe was convicted, November 26, of practicing medicine without a license, and fined \$150. She paid the fine and promised to leave the country. On the same day Dr. Luigi de Ambrosio was convicted of the same offense and fined \$250. Dr. John Lo Pinto was tried on the charges of failing to report a case of contagious disease and of issuing a false death certificate, found guilty of both offenses as charged, and fined \$250.

Buffalo.

General Vaccination Urged.—Dr. W. D. Green, the health commissioner, has advised general vaccination in those not successfully vaccinated within four years. Smallpox is prevalent in Rochester, Cleveland and Detroit, and because of the interchange of traffic and lack of quarantine between these places it is but a question of time before another visitation of smallpox may be expected in Buffalo. The facilities for caring for such cases in this city are a disgrace to any civilized community, and the Board of Councilmen are menacing the health of the city by their delay in the selection of a proper site for the new quarantine hospital, for which a \$50,000 bonded indebtedness has been authorized.

OHIO.

Long in Practice.—Dr. Charles L. W. Wilgohs, Akron, the oldest practitioner in the state, celebrated his ninety-ninth birthday anniversary November 20. He was in active practice until a year ago.

New Akron Hospital.—The cornerstone of the new Akron City Hospital was laid with appropriate ceremonies, November 23. The building, which will cost about \$60,000, will stand as a monument to the generosity of Messrs. O. C. Barber and George T. Perkins. At the annual meeting of the staff, November 18, Dr. William C. Jacobs was elected president, Dr. Louis S. Sweitzer, vice-president, and Dr. Harry D. Todd, secretary.

Alleged Malpractice.—In the case of Mary H. Kimple against Dr. Moses D. Rabenoyich, Toledo, a verdict was returned for the defendant, November 26.—Dr. James A. Duncan, Toledo, is the defendant in a suit brought by George E. Howe, for \$10,000, for alleged improper treatment of a fractured leg.—Oscar Shanks has sued Dr. Alexander Smith, Pottersburg, for alleged failure to properly set a broken leg, and considers that he has been damaged to the extent of \$5550.—In the case of Matilda Tucker against Dr. William J. Gillette, Toledo, charged with having left a sponge in the abdominal cavity after an operation for appendicitis, the jury found for the plaintiff.

Cincinnati.

Poison Ward.—Two rooms at the City Hospital are to be fitted up especially for the treatment of acute poisoning cases.

Medical Library To Be Open Evenings.—At the regular monthly meeting of the trustees of the Cincinnati Hospital, it was decided that for the accommodation of the physicians of the city, the library will be kept open Tuesday, Wednesday, Thursday and Friday evenings. This is a concession that has long been earnestly sought by local physicians as the hospital boasts of the best medical library in the city.

New Post-Graduate School.—It was recently decided to establish a new clinic and post-graduate school, to be called the Cincinnati Polyclinic. A site is to be purchased on Seventh Street, between Main and Sycamore. The following staff of

officers was elected: President, Dr. Louis J. Krouse; vice-presidents, Drs. Adolph Morganstern and Edwin S. Ricketts; secretary, Dr. Oscar W. Stark; treasurer, Dr. William C. Harris, and director of clinics, Dr. Travis Carroll.

The Bureau of Infectious and Contagious Diseases of the Cincinnati Health Department makes the following report for the week ended November 14: Total number of cases 78, with 16 deaths; typhoid fever seems to be somewhat on the decrease, only 12 cases having been reported during the week; diphtheria and scarlet fever are on the increase, 15 and 20 cases respectively having been reported; smallpox still continues with 3 cases for the week; other diseases scattering.

PENNSYLVANIA.

St. John's Hospital.—Allegheny recently received a new addition comprising 4 wards and 29 private rooms. The cost was about \$33,000.

Banquet at Pittsburg.—Dr. John B. Deaver was the guest of honor and made the principal address at the eleventh annual banquet of the Western Pennsylvania Medical Society, Pittsburg, November 25.

Hospital Endowment Fund.—Bryn Mawr Hospital has received from the estate of Mrs. Esther F. Wistar, Philadelphia, \$12,505.88 in cash and property valued at \$76,000, which is to constitute the Dr. Mifflin Wistar Memorial Fund.

Bequest to Allentown Hospital.—By the will of John E. Leutz, Allentown, a bequest of \$1000 is made to the endowment fund of the Allentown Hospital. Should the children of deceased die without heirs one-third of his estate is to go to the same institution.

Personal.—Drs. Walter E. Miller and Paris Shoaff, New Castle, were seriously injured in a runaway accident, November 21.—Dr. J. Ellis Glasgow, Cresson, has been made senior resident physician of Mercy Hospital, Pittsburg. He is succeeded by Dr. J. Stein of Philadelphia.

In Memory of Dr. Davis.—At its meeting, November 18, in Oil City, the Venango County Medical Society adopted resolutions of regret for the death of its late member, Dr. Francis F. Davis, and many of his associates paid personal tributes to his qualities as a man and as a physician.

Anatomical Board Complains.—The State Anatomical Board of Pennsylvania makes complaint that the pathologists of the Philadelphia Hospital and Almshouse are using about half of the dead bodies of that institution and that this renders it difficult to supply sufficient material to the medical colleges of the state. The pathologists affirm that they are not using more material than is necessary.

Physician Exonerated.—After a trial lasting two and a half days, Dr. Frank R. Gerhart, of Union, was acquitted of malpractice in the suit brought against him by Daniel Shirey. Judge Ementrout told the jury that there was no evidence presented that there was any lack of skill on Dr. Gerhart's part, and that the experts agreed that nothing could be done to save the leg, and that such being the case, it would be an outrage to find a verdict for the plaintiff. The jury was told that if there were such verdicts no physician would be safe in the practice of his profession.

Philadelphia.

The Philadelphia Pediatric Society is to be addressed, December 9, by Dr. A. Jacobi of New York. A reception will be held after the meeting at the Hotel Stentor in Dr. Jacobi's honor.

The New Hospital Site.—The probability of the purchase by the city of swamp lands for hospital purposes has led to the call for a special meeting of the county medical society to discuss resolutions protesting against such purchase.

Appropriation for Hospital.—The Bureau of Charities, in its estimate of expenses for next year, asked the finance committee of City Councils for \$1,250,000 to buy sites and erect buildings for an almshouse, hospital for the insane poor and municipal hospital.

Dr. Judson Daland entertained the members of the Daland Medical Society of the University of Pennsylvania at his residence, November 17, to the number of about 200. Before going to supper the guests listened to an address by Dr. Henry Beates, Jr., president of the State Board of Medical Examiners.

WISCONSIN.

Personal.—Dr. Peter H. Jobse, Milwaukee, started for Vienna, Berlin and Paris November 27.—Dr. William F. Becker has been appointed a trustee of the Milwaukee Hospital for the Insane.

Charged with Fraudulent Practice.—Charles A. Clark, alias Henry Spencer of Rosewell, Marathon County, was placed under arrest, November 25, charged with fraudulently obtaining his certificate to practice. It is charged by the police that Spencer, for a consideration of \$50, got his diploma from Dr. Charles A. Clark, Center Lake, Antrim County, Mich.

Against Tuberculosis.—The State Board of Health, in its annual report to be made to Gov. La Follette in January next, will recommend that an appropriation be made for the establishment of a state hospital for the treatment of tuberculosis. It will also urge the legislature to appropriate a large enough fund to carry on the work of stamping out this disease, which, it is believed, can be done if the outdoor treatment, now in vogue in the east, is introduced.

Entrance Examination Requirement.—According to accounts in the Wisconsin newspapers, as a result of the investigation by the State Board of Medical Examiners, all students who apply in the future for admission either to the Milwaukee Medical College or the Wisconsin College of Physicians and Surgeons must pass an examination conducted by a representative of the board. The charges against the College of Physicians and Surgeons were finally withdrawn.

GENERAL.

Government Feeding Test.—The test of various preservatives and their effects on food, health and nutrition is in progress in Washington. Professor W. H. Wiley, chief of the bureau of chemistry of the agricultural department, has begun a series of experiments on twelve young men in government employ, as mentioned editorially in THE JOURNAL of August 9, page 318.

Monument for Virchow.—The German committee in charge of the celebration in honor of Virchow's eightieth birthday is collecting funds to a monument to his memory. The undersigned will receive and acknowledge contributions: Drs. Frank Billings, president of the American Medical Association, 100 State Street, Chicago; Thomas D. Coleman, 505 Greene Street, Augusta, Ga.; A. Jacobi, 19 East 47th Street, New York City; W. W. Keen, 1729 Chestnut Street, Philadelphia; and Wm. H. Welch, 935 St. Paul Street, Baltimore.

Army Medical Staff Praised.—The annual report of the Secretary of War, Hon. Elihu Root, praises the Army Medical Corps and recommends that Major Walter Reed (since deceased) be appointed assistant surgeon-general, with the rank of colonel, and that Major W. C. Gorgas be made deputy surgeon-general, with the rank of lieutenant colonel. Concerning the abolishment of the army canteen, the secretary says:

I am convinced that the general effect of prohibiting the use of beer and light wines within the limited area of the army post is to lead the enlisted men to go out of the post, to frequent vile resorts which cluster in the neighborhood, to drink bad whisky to excess and to associate intimately with abandoned men and more abandoned women, and that the operation of the law is to increase drunkenness, disease of the most loathsome kind, insubordination, desertion and moral and physical degeneration.

Nobel Prizes for Finsen and Ross.—As THE JOURNAL announced last week, the Nobel research prize of \$40,000 has been awarded to Major Donald Ross of the Liverpool School of Tropical Medicine in recognition of his investigations into the mosquito malaria theory. The prize for natural science and chemistry is awarded to Dr. Emil Fischer, University of Berlin, and the prize for physics and medicine is to be divided between Drs. Arrhenius of the Stockholm High School and Finsen of Copenhagen. The formal announcements are to be made in Stockholm, Sweden, December 10, the anniversary of Dr. Nobel's death. The prizes will be presented by King Oscar of Sweden. They are the second of the series provided in the will of Alfred Nobel, the Swedish scientist and inventor of dynamite. He left a fund of about \$5,000,000 in the hands of trustees, the income of which was to be paid each year for the five most notable achievements in the interests of humanity. This income now amounts to the sum of \$200,000, making it possible to pay prizes of \$40,000 each to those considered most deserving. The two prizes not yet awarded are for the most notable achievement in literature and for the greatest service in behalf of international peace and world disarmament.

CANADA.

St. John, N. B., Vital Statistics.—During the year ended October 31, deaths in St. John due to diseases of the circulatory organs numbered 92; of the respiratory organs, 89; total from all causes, 714.

Ottawa Vital Statistics.—There were 1173 deaths at Ottawa during the past twelve months, as compared with 1273

for the preceding official year. The death rate per 1000, estimating the population of Ottawa at 60,000, was 19.5 as compared with 21.1 for the previous year.

Personal.—Dr. T. A. Starkey, whose appointment as professor of hygiene in the faculty of medicine at McGill University we recently mentioned, arrived in Montreal last week from London.

New Chemical Society at McGill.—A new and much-needed chemical society was recently formed at McGill University, with the following officers: President, Dr. Harrington; vice-president, Dr. Ruttan; secretary, Dr. Evans; executive, Drs. Walker and Barnes. Meetings of the society will be held fortnightly, on alternate weeks with the physical society. This is the first year that such a society has existed at McGill.

Toronto Barbers Want Hygienic Methods.—Representatives of the Toronto barbers waited on the Provincial Board of Health at its meeting last week and discussed with them a report which was presented to the board by Dr. J. J. Cassidy of Toronto. The subject will be introduced at the next meeting of the Toronto Barbers' Association with the idea of initiating definite action along the lines indicated in Dr. Cassidy's report.

Ontario Vaccination Act Out of Date.—The regular quarterly meeting of the Ontario Board of Health was held in Toronto last week. Dr. P. H. Bryce, secretary, presented his annual report, recommending that the old vaccination act of 1863 be repealed and a more simple act passed in its stead. He suggested that the new act provide for a monthly report of all children born in a municipality by municipal clerks to the district medical health officers who would be appointed public vaccinators required to proffer free vaccination to such children at their homes. It should provide also that no children be permitted to enter educational institutions until they presented certificates of vaccination.

FOREIGN.

German Congress Postponed.—On account of the International Medical Congress at Madrid, the German Congress of Internal Medicine, usually held each April, will not convene again until April, 1904.

Unveiling of Bust of Westphal.—A portrait bust of Karl Westphal, for many years chief of the insane and neurologic service at the Charité, Berlin, was unveiled, November 8, with appropriate ceremonies. The bust stands in front of the new psychiatric clinic, and the principal address was delivered by Westphal's successor, Professor Jolly.

Antivivisectionists in Germany.—The German Anti-Cruelty to Animals Society recently brought suit against Dr. Vogt, a well-known neurologist at Berlin, for unwarranted vivisection. The suit was dismissed by the authorities as unfounded. Some of the results of Vogt's valuable experimental research have been mentioned in THE JOURNAL.

Large French Army Mortality.—General Andre, French minister of war, said it was a grave question how to combat tuberculosis in the Army. Typhoid fever is also responsible for many deaths. The average annual deaths numbered 2174, while they numbered only 741 in the German Army. Statistics showed that the French Army since the treaty of Frankfurt had lost 99,000 men from disease, and the German Army 13,000.

Practice Not Transferable in Germany.—A physician sold his practice to another and sued for the \$475 agreed on, which the buyer had failed to pay. The courts at Braunschweig, where the transaction occurred, dismissed the case, claiming that a medical practice is not a marketable commodity, and that a transaction involving its sale is unworthy of the profession and contrary to the best interests of the community.

Warning Against Tetanus from Gelatin.—A local medical society in Germany recently sent a circular to all the druggists in its district warning them that gelatin derived from animals that had died from tetanus was liable to cause tetanus in those injected with it. The value of gelatin as a hemostatic was emphasized, and the fact that sterilization is unable to free it from the toxic action of the virus. The only means of prophylaxis is that the gelatin should be made from animals positively exempt from tetanus.

Students' Number of Progres Medical of Paris.—The issue of this weekly for November 8 contains detailed information in regard to the medical faculties, colleges, etc., the prizes offered, the theses presented, the hospitals and clinics, hours, etc., and every detail to furnish what aims to be a complete medical guide to France and the French-speaking countries. The various scientific societies that have any relation to medi-

cine are also described, and the regulations for admission to the colleges, for license to practice, etc.

Opening for Physicians in Paraguay.—A German physician residing at Asuncion, Paraguay, in a letter to a colleague in Germany, published in the *Allg. Med. Ct.-Ztg.*, states that skilful physicians are sought after in Paraguay and high fees paid. It is difficult to obtain permission to practice as the clique of charlatans intrigue against the admission of foreign physicians. But this obstacle once surmounted the physician finds appreciation. There are comparatively no restrictions to practicing outside of the cities, and yet the field is a good one.

Personal.—The new public hospital at Schöneberg, a suburb of Berlin, has been placed in charge of Professor Albert Landerer of Stuttgart. He has long been director of the Olga Hospital at the latter place. Von Düring's achievements in combating venereal disease in Turkey have been described in these columns. He has been appointed chief of the official polyclinic for cutaneous and venereal diseases at Kiel.—Dr. Helene Stelzner has been appointed voluntary medical attendant at the Charité, Berlin. She passed the "Staats-Examen" at Halle *summa cum laude*.

German Cancer Research Committee.—The regions in Germany in which cancer was found to be most prevalent according to the recent collective inquiry, are being thoroughly investigated by the central committee. Additional circulars of inquiry have been sent to the physicians practicing there and physicians are to be sent from the central office to study the conditions on the spot. Von Leyden, Kirchner and Wutzdorf are at the head of the cancer research committee and are striving to make it the nucleus for an international committee for the centralization of data on the subject of malignant neoplasms.

Open-Air Sanatorium for Tuberculous Children.—The German Red Cross Society maintained last summer a fresh-air sanatorium for children in a pine grove not far from Berlin, similar to the day resorts which have proved so successful for tuberculous men and women. The results were so strikingly beneficial that six of these open-air sanatoriums are to be arranged encircling Vienna, and the children recognized by the medical school inspectors as anemic or debilitated are to be transferred there. Arrangements are being planned for 1000 children from the start, with medical attendance and kindergarten teachers in charge.

The International Sanitary Conference of the American Republics was in session in Washington this week. The governments of Mexico, Cuba, Chile, Costa Rica, Salvador, Honduras, and the United States were represented. The conference is the outgrowth of the international meeting held a year ago in the City of Mexico. Quarantine and sanitation matters generally were discussed. Measures to improve the existing systems will be considered by an international sanitary bureau before the assembling of the next annual conference. Dr. Walter Wyman, surgeon general of the United States Public Health and Marine-Hospital Service, was elected president, and Dr. Arthur R. Reynolds of Chicago secretary.

Organization in Holland.—The Netherlands Medical Association has completed its fifty-second year of existence exclusively occupied with scientific questions. Its journal has always restricted its contents to strictly scientific communications. The younger members hope to see it transformed to take cognizance of the material interests of the profession, and devote a portion of its space to the questions of organization for material benefits. A letter from Amsterdam in the *Wiener klin. Rundschau* of November 2, describes these conditions and states that energetic social-political measures are required to stem the downward trend of the economic interests of the profession. A special meeting has been called to discuss these questions.

The Mexican Public Health Department.—As early as 1628 the medical men in the Spanish colonies secured the organization of a board of health, and the present "Consejo Superior de Salubridad" of Mexico proudly dates its birth from this beginning. The last *Boletín* contains a historical review of the work accomplished during the centuries, and cites ancient regulations which show the farsighted policy of its members from the earliest times. The fact that its resolutions and advice were not always heeded does not detract from the merit of the council. Since Diaz has been president the council has played an extremely important part in the general progress accomplished. In 1891 it drew up a sanitary code which was officially adopted by the authorities. Dr. Eduardo Liceaga has been the president of the council for a number of years, and

has been a familiar figure at all the sanitary and similar congresses of the last decades in America.

Berlin School Hygiene Association.—Professor Baginsky presided at the first public evening meeting of this new society. The first address was by Hoffa, on the "Origin of Spinal Curvature During School Life," illustrated by drawings and casts. He remarked that "sitting is fatiguing under all circumstances," and that the slight expressions of fatigue in the attitude gradually become fixed habits in children and entail actual curvature. The proportion of scoliotic children constantly increases with the higher classes. Girls are more inclined to it than boys, and in the girls' seminaries more than 50 per cent. of the scholars are affected. He recommended seats with "the minus distance," and appealed most earnestly for frequent gymnastic exercises at brief intervals. Lehmann spoke on "Inheritance and Experience," observing that modern dramatic art has made such a bugaboo of heredity that there is a tendency among teachers to ascribe altogether too much importance to it in their professional work.

LONDON LETTER.

Pathogenic Bacillus Coli in Ice Creams.—In reference to an outbreak of ice-cream poisoning which has recently been described in *THE JOURNAL* (page 1060), Dr. Klein made an important bacteriologic report. He drew attention to the fact that in several outbreaks of acute gastroenteritis due to the consumption of particular meats the variety of bacillus coli known as bacillus Gärtner had been proved to be the real cause of the disease; but there had been other similar outbreaks of disease in which not the bacillus Gärtner, but other varieties of bacillus coli were the cause; he referred to the Carlisle outbreak (pork pie) described in the reports of the medical officer of the Local Government Board for 1889, and to the Portsmouth outbreak (meat pie) described in the same reports for 1890. Quite recently Dr. Klein has found in certain samples of ice creams a highly virulent variety of bacillus coli which was certainly not bacillus Gärtner. Some of these ice creams were made in shops which were under suspicion of having sold ice cream that caused acute gastroenteritis in a number of boys. The virulent bacillus coli isolated in its action on rodent animals by injection and after ingestion in its cultural and morphologic characters, was described and demonstrated by specimens. The virulent bacillus coli was met with in a succession of samples made on different days by the same maker under very unsanitary conditions as to locality, manipulation and storage. As soon as these unsanitary conditions became amended the ice creams proved harmless to animals. This is an experimental confirmation of the correctness of the recently-passed law as to the manufacture and sale of ice creams.

Cancer Research Fund.

The executive committee have selected Dr. E. F. Bashford, assistant to Professor Sir Thomas R. Fraser of Edinburgh from among the numerous applicants for the post of superintendent of cancer research. Dr. Bashford, who has recently been engaged in research work in Professor Ehrlich's laboratory of Frankfurt, and who is acquainted with the cancer research work now going on in Germany, will at once enter on his duties. A special sub-committee on statistics is being formed, and the general organization of the scheme is now being proceeded with as far as the funds will permit. The amount collected as yet is only about \$225,000, which is considerably less than the sum necessary to give full effect to all the objects of the scheme.

Colonial Medical Reports.

"Selections from Colonial Medical Reports for 1900 and 1901" has been issued recently. The volume deals largely with tropical medicine. Dr. Thomson of Hong Kong confirms the fact that on the presence of the anopheles depends the number of cases of fever in a given locality. The total destruction of such a large family as the mosquito seems almost impossible, though in individual cases much good may be done. Dr. Harvey of Bermuda discusses the yellow fever epidemics in that colony in 1856 and 1864, and points out several facts which could well be explained by the theory of the dissemination of the disease by mosquitoes. He thinks that probably the culex mosquito has been introduced to Bermuda by ships or travelers, and the reason that there is no malaria is that the anopheles mosquito has not yet been imported. The extermination of mosquitoes in Bermuda, where every house has its tank for drinking water, he thinks impossible, especially as the female culex mosquito will use the smallest collection of stagnant rain water for breeding purposes. Beri-beri receives much attention in several of the reports. It is one of the

chief causes of death among the Malays. Dr. W. L. Braddon, state surgeon Negri Sembilan, is of opinion that it is due to the eating of rice, which has been rendered toxic. Dr. Gimlette, acting residency surgeon of Peang, referring to the observation in Japan that dogs may contract beri-beri, states that at Benton, where beri-beri was very prevalent in 1900, ducks apparently succumbed to the disease in large numbers. In the Dutch East Indies the disease has apparently been found in hens. Another disease, the causation of which is still disputed, is yaws. It has extended considerably in Trinidad and Tobago, in spite of the efforts to combat it. Dr. Lovell, the surgeon-general, thinks that local house infection plays an important part in its dissemination. He advocates the removal of patients and the disinfection of the contaminated area. The report on syphilis from Basutoland shows that the natives there show little manifestation of the disease at its commencement. "The hard chancre is very rarely seen, yet let a single case of syphilis be introduced into a previously clean village, and in a few months a large percentage of the inhabitants, especially children, will be found with secondary eruption." It is noteworthy that in Europeans who contract the disease from natives the classical features are always observed. Dr. Otto Galgey, in reporting from St. Lucia on the filaria sanguinis hominis, refers to Dr. Lowe's discovery that filaria is directly inoculated into men by the bite of the mosquito.

Correspondence.

A Higher Standard of Entrance to Ohio Medical Schools.

COLUMBUS, OHIO, Dec. 1, 1902.

To the Editor:—We have read with approval your editorial entitled "A Higher Standard of Entrance to Ohio Medical Schools" on page 1326 of *THE JOURNAL* of Nov. 22, 1902, but we wish to call your attention to an error which we find in the last paragraph of this editorial. The paragraph referred to reads as follows:

It is not to be expected that any new methods will be perfect from the first, and the present defects in the Ohio system, the lack of uniformity of examinations by the different examiners, for example, are only the temporary imperfections of a new machine that will be remedied by time and use.

We beg to take exceptions to the statement that there is a lack of uniformity in the examinations for entrance to medical colleges in the State of Ohio. The questions used in the examinations in the four cities, Cincinnati, Cleveland, Columbus and Toledo, are exactly the same, are given out at exactly the same hour and on the same day, so that we regard these examinations as nearly uniform as can be made unless the entire examination should be conducted in one city and under the supervision of one man.

The four examiners meet together previous to each examination and agree among themselves as to the standard of grading. We also desire to call your attention to section 4403-c of the law regulating the practice of medicine and surgery in the State of Ohio; also to the enclosed list of questions which were given out at all the entrance examinations in September of this year.

In justice to the Ohio Board, we would request that the error be corrected. Very sincerely,

N. R. COLEMAN, President.

FRANK WINDERS, Secretary.

[We are glad to publish the above communication. The objectionable paragraph in our editorial referred to was based on criticisms made by gentlemen in Ohio. While in that state recently we took occasion to learn how the profession liked the new law and its working, by interviewing several interested parties. With practical unanimity all agreed that the change was a good one, although it was hurting the colleges. The only criticism made was that the examination in the four cities was not uniform. None of those interviewed seemed to know that the same questions were asked at all the examinations, and that they were, therefore, uniform. Three or four gentlemen were very insistent that this supposed lack of uniformity was a most grievous affair. An intimation was made, for instance, that the standard of examination for entrance into the Cincinnati medical schools was very much higher than for the schools in certain other cities. On the other hand, a gentle-

man from Columbus assured the writer that the standard in Cincinnati was much lower than in Columbus, that in the latter city being, in fact, higher than in either of the other three cities. We are especially glad to be able to convey the information to the Ohio profession that there is a uniformity in these entrance examinations in their state. We wish that those who are interested in medical education, as well as those who have any interest in medical legislation, would look into the Ohio law. There are now three states—Ohio, New York and Pennsylvania—which have taken from the medical colleges the control of the entrance requirement.—Ed.]

A Simple Chloroform Dropper.

WASHINGTON, D. C., Nov. 27, 1902.

To the Editor:—To obtain a dropper which will drop and not flow in a small stream or fail to drop except by violent agitation, I have adopted the following plan:

A piece of toothpick or a match stem is inserted between the cork and neck of the bottle, the rapidity of the flow being controlled by the tightness of the cork or the size of the splinter. The toothpick is then broken off close to the cork. It does not become occluded, and the number of drops each minute are about the same. It fills every requirement that the more expensive dropper does, and in some respects is far superior. Not infrequently we are compelled to intrust the anesthetic to an inexperienced person, and we have a little less concern if we know that the chloroform can be given drop by drop only, and by no possible chance can be poured on in larger quantities.

Further, we are often called on to administer anesthesia most unexpectedly; in those instances, this impromptu dropper is a friend in need. It may be given from the original container and without notching the cork, as is sometimes done, thus subsequently losing chloroform by leakage and evaporation.

I do not claim originality for this method, but saw it first used by Dr. W. P. Carr of this city, and have since used it frequently with great satisfaction. CHAS. S. WHITE.

State Boards of Registration.

Schedule of Minimum Educational Requirements of Medical Colleges, Adopted by the Colorado State Board of Medical Examiners, October 7, 1902.

Dr. S. D. Van Meter, secretary, sends us the following schedule:

On and after Jan. 1, 1903, no medical school will be considered in "good standing" which does not, as a minimum, require the following schedule:

CONDITIONS OF ADMISSION TO LECTURE COURSES.

1. Creditable certificates of good moral character signed by two physicians of good standing in the state in which the applicant last resided.
2. As evidence of preliminary education, as a minimum requirement, a diploma or certificate of graduation from a high school, or a certificate signed by a principal of a regularly organized high school, or by the examiner of the faculty of a recognized literary university, or by the state superintendent of public schools, of having matriculation in all the several branches of a four years' high school course. The applicant shall not be conducted by any member of the college.

Each applicant for a state certificate to present documentary evidence of his preliminary education, together with his medical diploma, when applying for license on a diploma dated after Jan. 1, 1903.

The conditions above set forth will govern in the case of all persons admitted to the freshman year of a medical college in "good standing" on or after Jan. 1, 1903.

ADVANCED STANDING.

Applicants holding the degree of A.B. or B.S., or an equivalent degree, from a regularly established college of arts or science, which requires an attendance of three or more years as an essential to graduation, may be given credit for work done in the branches of the medical curriculum of the first year and may be advanced to the sophomore year of a four years' medical course, on condition that they comply with the entrance requirements of this board and that they subsequently complete the work of the freshman year if not already completed, and that the work already taken shall not be below the standard required by this board.

The same conditions may be allowed on the same conditions to dentistry degree from a recognized college of medicine, or documentary evidence of having completed in a reputable university or college of arts or science the major part of the work usually embraced in the curriculum of the freshman course of a recognized medical school.

No such advanced standing shall be allowed until after the applicant shall have either graduated as indicated or performed the work specified above, and not until three months after the completion of said work.

The above requirements for advanced standing will govern in the case of all persons admitted to the sophomore year of a medical college on or after Jan. 1, 1903, and may be made operative prior to that time.

Graduates of medical colleges recognized at any time by the Colorado State Board of Medical Examiners may be admitted to any class without examination. Students of said colleges who possess certificates of attendance and of successful examinations can enter without examination the term immediately following that previously attended. The student shall be required to pass an examination in all branches in which he has been found deficient. Students who have attended one or more full terms in colleges not fully recognized by this board may be granted advanced standing in accordance with such attendance, on complying with the entrance requirements set forth in the conditions of admission to lecture courses, and passing all examinations and performing all laboratory work of the classes below that which they enter, providing that the work already done conforms to the requirements of this board.

Graduates or students of colleges to which no recognition is given by the Colorado State Board of Medical Examiners can be granted no advanced standing whatever.

LENGTH, NUMBER AND CHARACTER OF COURSES OF LECTURES.

The college shall have a four years' course of instruction, consisting of four terms, extending over a period of four calendar years, and the minimum time between the commencement of the work of the freshman year and the ending of the work of the senior year, on which all students are required to be in attendance, shall be not less than forty months. No two terms begun on or after Jan. 1, 1903, shall commence and end within any consecutive sixteen months.

The time occupied in each regular term begun on or after Jan. 1, 1903, shall be not less than seven months or thirty weeks, and each such term shall consist of not less than eight hundred hours of work.

The branches of medicine to be included in the course of instruction shall be at least as follows: (1) Anatomy, (2) physiology, (3) chemistry, (4) materia medica and therapeutics, (5) theory and practice of medicine, including ophthalmology, otology, dermatology and neurology, (6) pathology and bacteriology, (7) surgery, including orthopedic surgery, (8) obstetrics, (9) gynecology, (10) hygiene, (11) medical jurisprudence (forensic medicine).

ATTENDANCE.

Regular attendance during the entire lecture courses shall be required, allowance being made only for absences occasioned by the sickness of the student or his immediate family, such absence not to exceed 20 per centum of the course.

DISSECTIONS, CLINICS AND HOSPITAL ATTENDANCE.

1. Each student must have dissected at least the lateral half of a human cadaver.
2. He shall have received clinical and hospital instruction throughout at least two annual terms.

INSTRUCTION.

The college must have a sufficient and competent corps of instructors, and facilities for teaching, dissections, ambulatory and hospital clinics such as obtain in the majority of medical colleges in the United States.

GRADUATION.

No student shall be graduated by any medical college in "good standing" with the Colorado State Board of Medical Examiners who has not completed four full terms of lectures, as prescribed by the rules of the said board (certain persons to whom advanced standing is allowed excepted), and has completed the requirements of the said college, as set forth in the conditions of the college, and has completed in the diploma is granted, a continuous course of lectures in the senior year of at least seven months in duration.

FURTHER CONDITIONS OR RECOGNITION OF MEDICAL COLLEGES.

1. Only regularly conducted and legally chartered medical colleges which conform to the conditions of admission to lecture courses, the course and period of study, the number, character and length of lecture terms, the duration of attendance on hospital and clinical instruction, as set forth in the schedule of minimum requirements adopted by the Colorado State Board of Medical Examiners, and the other requirements of a medical education which obtain as a condition of the established medical colleges in this state, shall be considered medical institutions for the purpose of the Act to Regulate the Practice of Medicine in the State of Colorado.
2. No college shall be considered in "good standing" until it has established its claim to such standing by an active existence of not less than four years, and then only on compliance with the terms of the first condition. *Provided*, that colleges which after a personal investigation made by a committee of the Colorado State Board of Medical Examiners are shown to comply with the schedule of minimum requirements and to possess a sufficient and competent corps of instructors, and the necessary facilities for teaching, may, at the discretion of the board, be granted full recognition during the first year of existence.
3. All medical colleges in "good standing" with the Colorado State Board of Medical Examiners will be required to publish in their annual announcements or catalogues a complete list of all matriculates and a separate list of all graduates of the session or year immediately preceding.
4. No medical college will be considered in "good standing" with the Colorado State Board of Medical Examiners which publishes in its annual announcement or catalogue any misrepresentations regarding the curriculum of the college, or the facilities for instruction or the number of students matriculating or graduated.

All rules and regulations adopted by the Colorado State Board of Medical Examiners will stand repealed as of Dec. 31, 1902.

District of Columbia Report.—Dr. Wm. C. Woodward, secretary of the Board of Medical Supervisors, of the District of

Columbia, reports the examination held at Washington, October 9, as follows: Number of subjects examined in, 17; total number of written questions, 80; percentage required to pass, 75; partly oral and partly written examination; total number examined, 11; passed, 10; failed, 1.

Candi- date.	Sch. of Pract.	PASSED.		Year Grad.	Per Cent.
		College.			
349	R.	College of P. and S., New York....	1902	85.41	
336	R.	Columbian University	1901	83.12	
339	R.	Columbian University	1902	88.47	
340	R.	Columbian University	1902	90.03	
344	R.	Columbian University	1902	81.37	
334	R.	Columbian University	1902	87.25	
348	R.	Georgetown University	1901	87.22	
345	H.	Hahnemann Med. Coll., Phila.....	1901	85.05	
315	R.	Johns Hopkins Medical School.....	1901	84.18	
335	R.	Woman's Med. Coll., Philadelphia..	1897	87.44	
FAILED.					
347	R.	University of Pennsylvania.....	1898	68.75	

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

NO NOTICE TAKEN OF UNSIGNED COMMUNICATIONS.

In spite of the notice at the head of this department we are daily receiving unsigned communications, many of which we should be glad to notice. We repeat that every unsigned letter received is consigned to the waste basket, without reading, if the fact that it is not signed is discovered before it is read. We do not print the names of writers if requested not to do so.

FOWLER'S POSITION.

MATAGORDA, TEX., Nov. 10, 1902.

To the Editor:—Will you please inform me in your query column as to what is meant by Fowler's position in appendicitis?

S. A. FOOTE, M.D.

ANS.—We presume our correspondent refers to the upright position in which the patient is placed after abdominal operations; a position which, we believe, was first advocated by Dr. G. R. Fowler of Brooklyn, some two years ago. Instead of being put in bed in the horizontal position, the patient is placed in the "sitting up" position, so that the trunk is perpendicular. The object of the position is to facilitate drainage into the pelvis since septic processes confined to the lower part of the peritoneal cavity are less liable to result seriously than would be the case higher up, or in the diaphragmatic region. This position is adopted by some surgeons after all abdominal operations.

REMEDIES FOR OBESITY.

NEWARK, N. J., Nov. 29, 1902.

To the Editor:—On p. 1269 of THE JOURNAL I notice that you refer an inquirer to Von Noorden's article and forget all about the work of our American investigator, Heinrich Stern, on this subject. You yourself published an essay of Dr. Stern's on this subject which in my opinion is classic. I am very much astonished that you should have allowed such an omission.

W. O. BAILEY.

ANS.—We regret the oversight, and thank our correspondent for calling attention to it. Dr. Stern's article is one of the most important that has been written on the subject. It appeared in THE JOURNAL of February 15, p. 447, of vol. xxxviii.

Marriages.

W. J. REDFIELD, M.D., Union, Neb., to Miss Roe of Omaha, Neb., November 19.

FRANK J. POWERS, M.D., to Miss Annie Theresa Grogan, both of Baltimore, November 19.

EDWARD H. BOUNDS, M.D., to Miss Ellene Drescher, both of Hannibal, Mo., November 19.

THOMAS F. STALEY, M.D., to Miss Sue Sayers Reynolds, both of Bristol, Va., November 18.

FRANCIS J. WELSH, M.D., to Miss Minnie Doremus, both of Kalamazoo, Mich., November 26.

BAKER FORE, M.D., Marion, S. C., to Miss Aline Cole of North Birmingham, Ala., November 15.

EDWARD V. MILHOLLAND, M.D., to Miss Ella Cecilia Gordon, both of Baltimore, November 19.

SAMUEL B. ALISON, M.D., Carlowville, Ala., to Miss Emma Lide of Richmond, Ala., November 27.

GEORGE EDWARD KINCAID, M.D., Clinton, Iowa, to Miss Gra Gould of St. Louis, Mo., November 24.

ALFRED LARGE, M.D., Great Barrington, Mass., to Miss Sabir E. Archibald of Darien, Conn., November 15.

FRANK H. MUNKWITZ, M.D., to Miss Hedwig Josephir Elser, both of Milwaukee, Wis., December 3.

JOHN ARCHIBALD BROWN, M.D., Kankakee, Ill., to Viol Henriette Palmer, M.D., Chicago, November 27.

ABRAHAM D. MURPHEY, M.D., Cincinnati, Ohio, to Miss Kat May Anderson of Owensboro, Ky., November 20.

WILLIAM B. PIGG, M.D., South McAlester, I. T., to Miss Florence Rosser of Fayetteville, Ark., November 14.

NEWTON S. BACON, M.D., North Cambridge, Mass., to Miss Anne Rogers Dustin of Gloucester, Mass., November 6.

FRANCIS ALBERT BAKEMAN, M.D., Franklin, N. H., to Miss Mabel Pierson Johnson of Winthrop, Mass., November 12.

JOHN S. PINE, M.D., of Frederick County, Va., to Miss Ell M. White of Lebanon Church, Shenandoah County, Va., November 19.

Deaths.

Thomas H. Price, M.D. Jefferson Medical College, Philadelphia, 1876, died at the Episcopal Hospital, Philadelphia November 22, from sepsis consequent on a splinter wound of the hand, after an illness of two weeks, aged 54. He was a member of the Philadelphia County Medical Society and of the Philadelphia Emergency Corps.

Frederick Eugene Potter, M.D. University of Vermont, Burlington, 1860, who served throughout the Civil War, and for ten years thereafter as a surgeon in the U. S. Navy, and then practiced in Portsmouth, N. H., died at his home in that city, November 18, after a lingering illness, aged 63.

J. A. Ferguson, M.D., Ottawa, the hero of the disastrous fire at the Laurentian Sanitarium at Ste. Agathe des Monts, Quebec, some months ago, died at the home of his parents, November 19, aged 29. It is only a few weeks since he was presented with the Humane Society's medal.

William T. Garwood, M.D. Cooper Medical College, San Francisco, 1864, for nearly 40 years a practitioner of that city, died, November 21, from paralysis, after an illness of two years, aged 65.

Lee B. Windham, Jr., M.D. Medical College of Alabama, Mobile, 1900, died, November 14, at Stafford, Ariz., where he had gone for his health from his home in Stone, Ala., a few weeks before.

Edwin G. Granville, M.D. Kansas City Hospital College of Medicine, 1885, died at his home in that city, November 24, from spinal disease, after an illness of twelve years, aged 59.

Z. R. Millard, M.D. Medical College of Evansville, Ind., 1846, one of the oldest practitioners of Southern Illinois, died at his home in Thackery, Hamilton County, November 19.

Philip P. Duval, M.D. University of Virginia, Charlottesville, 1846, died at his home in Richmond, November 20, from pneumonia, after an illness of eight days, aged 75.

George A. Hillsman, M.D. Jefferson Medical College, Philadelphia, 1888, died at his home in Livermore, Ky., November 19, from pneumonia, after a short illness, aged 40.

Henry J. Cushing, M.D. Harvard University Medical School, Boston, 1868, died at his home in Merrimac, Mass., November 18, from angina pectoris, aged 65.

Charles H. Shaffer, M.D. Western Reserve University, Cleveland, Ohio, 1882, died at his home in Elizabeth, Pa., November 21, after a brief illness, aged 44.

Charles C. Sprague, M.D. Rush Medical College, Chicago, 1869, died suddenly at his home in Hull, Ill., November 19, from heart disease, aged 67.

A. C. Brasel, M.D. Tennessee Medical College, Knoxville, 1901, died at his home in Petros, Tenn., November 21, after an illness of six weeks.

John M. Cunningham, M.D. University of Louisville, Ky., 1891, died at Marlinton, W. Va., November 20.

Deaths Abroad.

Dr. Wulffert of Berlin, founder and president of the "Society of Abstinent Physicians," died November 5.—Dr. F. Fuhr, professor of surgery at Giessen, died in that city, November 3. His works include articles on the enucleation of the thyroid

gland, surgical treatment of intestinal occlusion, also a historical study of goiter in antiquity.—Dr. Joaquim de Magalhães, the oldest physician in Brazil, died at Baepén, October 10, aged 93. He was also prominent as a member of the legislature.

Dr. E. Liebendoerfer, formerly a medical missionary to India, died at Stuttgart in his fiftieth year. He served as a missionary for some years and then studied medicine, returning for ten years' service as a medical missionary, until compelled to leave India by failing health. He was the principal founder of the German Society for Medical Missions, and the fine hospital now approaching completion at Cameroon is mainly due to his efforts.

Sensai Nagayo, M.D., court counselor and president of the Central Sanitary Board, Japan, the father of sanitation in that country, died at his home in Tokyo, recently, aged 63.

Dr. Monere, mayor of Palaiseau, aged 95, who commenced the practice of medicine in 1830. He was a member of the *Conseil général* of the Seine for fifty years.

Book Notices.

A TEXT-BOOK OF SURGERY. By Dr. Hermann Tilmanns, Professor in the University at Leipzig. Translated from the Seventh German Edition by Benjamin T. Tilton, M.D., Instructor in Surgery, Cornell University, and John Rogers, M.D., Instructor in Surgery, Cornell University. Edited by Lewis A. Stimson, M.D., Professor of Surgery, Cornell University. Volume I. The Principles of Surgery and Surgical Pathology. With 516 Illustrations. Cloth. Pp. 841. Price, \$5.00 per volume. New York: D. Appleton & Co. 1901.

Tilmanns' Surgery has been a standard work in Germany for many years, and the great popularity of the work has been well deserved. The English translation of the seventh edition by Drs. Tilton and Rogers places in the hands of those unable to read German a work of great value, and the labor of the translators will certainly be appreciated. The amount of space devoted to the subjects in this first volume is not only an indication of their importance, but also of the very thorough manner in which they are covered. It is unfortunate that such German works are only translated after another edition has appeared, or is about to appear in the original, so that the translation is always one edition behind; but notwithstanding this fact the translation of Tilmanns' Surgery is a very valuable addition to English surgical literature.

THE STORY OF A LIVING TEMPLE. A Study of the Human Body. By Frederick M. Rossiter, B.S., M.D., and Mary Henry Rossiter, A.M. Cloth. Pp. 348. Price, \$1.00 net. Chicago, New York and Toronto: Fleming H. Revell Co. 1902.

This book is intended for, and will be read with profit by, children no matter of what age. It is the story of the living temple—the body—told in simple language so that the youngest who can read will understand. It is the child's text-book of anatomy and physiology, yet free from even a hint of a technical word. A religious and moral sentiment pervades the work, and no occasion is lost to call attention to the harmful habits in living, in eating and in drinking, to the harm in fast eating, improper foods, tobacco, alcohol, tea, coffee, etc. While facts are sometimes sacrificed to theory, and slight exaggeration is occasionally indulged in, on the whole the book is one to be highly commended. It is written in an entertaining, simple, yet dignified style, so that the reading of it by the average boy or girl will be not only profitable, but a pleasure.

HUMAN EMBRYOLOGY AND MORPHOLOGY. By Arthur Keith, M.D. (Aberd.), F.R.C.S. (Eng.), Lecturer on Anatomy, London Hospital Medical College. Illustrated. Pp. 324. Price, \$4.50. London: Edward Arnold. 1902. New York: Longmans, Green & Co., Agts.

The necessity of a knowledge of human embryology is constantly becoming more apparent, particularly to the surgeon, as many pathologic conditions are to be comprehended only by a thorough understanding of the evolutionary development of the various organs and tissues of the body. In the present volume not only is the embryology clearly described, but where possible particular mention is made of the effects of arrest of development and the surgical importance of vestigia atavisms, etc. The arrangement of the matter seems rather peculiar, as the work begins with a description of the development of the face and neck, with the accessory cavities and sense organs, before anything is said of the various layers of the embryo from which the various organs and parts are developed. It would seem more rational to begin at the beginning, but not-

withstanding the confusion in the arrangement of the matter, the work is a very deserving one.

THE TREATMENT OF FRACTURES. By Chas. L. Scudder, M.D., Assistant in Clinical and Operative Surgery, Harvard Medical School. Third Edition. Revised and Enlarged. Octavo, 480 Pages. With 100 Illustrations. Polished Buckram. Price, \$4.50 net. W. B. Saunders & Co. 1902.

The first edition of this book appeared in 1900, the second in 1901, and the third in 1902, a record which in itself is a sufficient recommendation of the excellence of the work. As the former editions were reviewed in these columns, it is only necessary to state that in this, the third edition, much new matter has been added. Deserving of particular mention is the chapter on gunshot fractures of the long bones, based on recent experiences in the late wars. Several uncommon fractures have also been illustrated and described, which add to the value of the work. The same excellence in point of illustration, paper and print has been maintained in this as in the former editions.

TEXT-BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By John J. Reese, M.D., Late Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania. Revised by Henry Leffmann, A.M., M.D., Toxicology in the Woman's Medical College. Pp. 660. Price, \$3.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

This edition of Reese's medical jurisprudence has been revised, bringing it up to date, noticing more modern procedures, agents, etc., which need consideration under this head. In other respects it is largely the same as its predecessors and will probably hold its place in the literature of this important department of law and medicine.

KIRK'S HANDBOOK OF PHYSIOLOGY. Revised by William H. Rockwell, Jr., M.D., and Charles L. Dana, A.M., M.D., Professor of Diseases of the Nervous System, Cornell University Medical College, New York. Seventeenth American Edition. With Upwards of 500 Illustrations, Including Many in Colors. Cloth. Pp. 854. Price, \$3.00. New York: Wm. Wood & Co. 1902.

The rapid appearance of new editions of Kirk's Physiology shows in what favor it is held. In the present one the chief changes are found in the articles relating to physiologic chemistry, the very marked advances in this department having required them. In other respects the work is much the same as the previous edition.

A BRIEF OF NECROSCOPY AND ITS MEDICOLEGAL RELATIONS. By Gustav Schmidt, M.D. Pp. 186. Price, \$1.00 net. New York and London: Funk and Wagnalls Company.

This is a pocket manual prepared to meet the special needs of a physician, lawyer and expert witness, produced in very compact form with leather binding, rounded edges, and one that will undoubtedly be largely used by lawyers and others who have to deal with the cases of autopsies, etc., in legal practice. It seems to be well arranged and fairly full, and the diagrams in the beginning will be an aid to the lay users of the work.

THE QUEEN SELF-REGULATING X-RAY TUBE. Paper. Pp. 35. Queen & Co., Inc., 110 Chestnut St., Philadelphia.

While this is only a trade catalogue it is deserving of mention in these columns from the fact that it contains illustrations showing in actual colors the appearance of x-ray tubes when operating under different conditions. These are unique and will be interesting to those using the x-ray machine.

Medical Organization.

OHIO.

When the Constitution and By-laws proposed for State Associations by the Committee on Organization of the American Medical Association were adopted by the Ohio State Medical Association at its Toledo meeting, on May 29, 1902, only a very few changes were made. The amendments made are as follows:

CONSTITUTION.

Article VIII, Section 1. Provision was made for four vice-presidents instead of three.

BY-LAWS.

Chapter IV, Section 2. The second word was made "shall" instead of "may," so that it is mandatory on the house of delegates to create councilor districts.

Same chapter, Section 13. The following phrase was added to the end of the section: "providing it shall not make void the verdict of a referendum."

Chapter VI, Section 2. The concluding words: "the council shall select one of the vice-presidents to succeed him", were struck out, and the following substituted: "the vice-presidents shall succeed him in the order of their election."

Chapter IX, Section 1. The annual dues were fixed for the present at \$1 instead of \$2.

Chapter X, Rules of Conduct, was reconstructed, and now reads as follows: "The ethical principles governing the members of the American Medical Association shall govern the conduct of the members of this association in their relations to each other and to the public."

A few other minor and unimportant verbal changes were made.

The reorganized association voted that until the next annual meeting the greater part of the routine work of the association, including especially the collection of the annual dues from members, should proceed as formerly under the old form of organization.

To the council of ten members was left the work of dividing the state into provisional councilor districts.

One councilor, Dr. Brooks F. Beebe, Cincinnati, has already assisted a number of the neighboring county societies, and as a result the Adams County Medical Society has adopted the new constitution and by-laws, and its secretary, Dr. O. T. Sproull of West Union, has forwarded to the secretary of the state association a full report on all the physicians in Adams County. This admirable piece of work clearly shows that the societies in counties not containing many large towns can very readily comply with the requirement in the state constitution that full lists of all physicians practicing in the county shall be made out each year, providing their secretaries are sufficiently interested.

Fayette County (Tenn.) Medical Society.

The physicians of Fayette County met at Somerville, November 12, for the purpose of organizing a county medical society. After a short explanation from Dr. Isaac A. McSwain, Paris, councilor for the district, and Dr. James A. Albright, Somerville, of the plan of organization, the following officers were elected: Dr. William B. Granberry, Somerville, president; Drs. David M. Morrow, Oakland, and M. M. Moody, Brinkley, vice-presidents, and Dr. A. B. Yancey, Jr., Williston, secretary and treasurer. Dr. James A. Albright was elected delegate to the Medical Association of the State of Tennessee.

Marquette County (Mich.) Medical Society.

This society, a branch of the Michigan State Medical Society, was organized, November 14, in Marquette. The new society will include in its jurisdiction Alger County, which has not a sufficient number of physicians for a separate organization. The constitution and by-laws recommended by the state medical society were adopted. Officers were elected as follows: President, Dr. John H. Andrus, Ishpeming; vice-president, Dr. Orrin G. Youngquist, Marquette; secretary, Dr. Harry J. Hornbogen, Marquette, and treasurer, Dr. George D. Beech, Champion.

Pulaski County (Ark.) Medical Society.

At a meeting, in Little Rock, November 17, the name of Little Rock Medical Society was changed to Pulaski County Medical Society. The constitution and by-laws as promulgated by the American Medical Association were adopted. The annual election of officers resulted as follows: Dr. Robert B. Christian, president; Dr. Anderson Watkins, vice-president; Dr. Charles C. Stephenson, secretary, and Dr. Rezin W. Lindsey, treasurer and librarian, all of Little Rock.

Williamson County (Tenn.) Medical Society.

A large number of physicians of Williamson County met at Franklin, November 15, to organize a county society. Dr. James P. Hanner, Franklin, was elected president; Dr. J. Blythe Core, Bethesda, vice-president, and Dr. Samuel White, Franklin, secretary. Dr. Worcester A. Bryan, Nashville, representing the Medical Association of the State of Tennessee, was present, and addressed the meeting and assisted in the organization of the society.

Kent County (Mich.) Medical Society.

About 100 physicians met in Grand Rapids, November 14, and formed the preliminary organization of the Kent County Medical Society, to be under the jurisdiction of the Michigan State Medical Society and the American Medical Association. Dr. Ralph H. Spencer was made temporary chairman and Dr. J. Harvey Innis, temporary secretary, both of Grand Rapids. Dr. Joseph B. Whinery, Grand Rapids, outlined the position of the proposed organization relative to its connection with the state and national bodies. A committee was appointed to pass on names and standing of the members who signed the following agreement: "We, the undersigned, agree to abide by the laws and regulations of the State Medical Society, to practice medicine without reference to school or pathy and to abide by the Code of Ethics as set forth by the American Medical Association. At the meeting for organization, November 21, Dr. Schuyler C. Graves was elected president; Dr. Richard R. Smith, vice-president; Dr. Francis J. Lee, secretary, and Dr. Leonidas E. Best, treasurer.

Medical Societies and the American Medical Association.

The following is quoted from the *Charlotte Medical Journal*:

One of the very vital and important subjects to the medical profession to-day is that of becoming more completely organized; that is, that there may be acquired a more nearly full membership of the societies of the United States in comparison to the whole number of physicians in active practice.

Such an organization of the profession in the Union would be of the greatest good to the largest number, in the truest meaning, of which the expression may be applied. Such an organization of the medical profession in the United States would be a power for the general good to our whole population. There would then be an influence which when exerted upon the legislative bodies for the purpose of securing sanitary measures or of prosecuting state medicine, would accomplish the object desired. Those means could thus be secured, which would add to the physical and moral welfare of every individual and of the whole population of the nation.

Besides, such an organization would be a vast post-graduate course to every physician in the land, serving not only as a continuation of the clinical atmosphere to the recent graduate, but a continuous school for the general practitioner, who strives to keep abreast of the real progress of the professional and scientific work in medicine. Dr. Nicholas Senn, in his presidential address in 1897, before the American Medical Association, said: "The medical societies, large and small, are the legitimate and proper post-graduate schools."

Through such means the profession takes a higher rank and each individual member thus becomes more proficient in his daily work. Through such physicians the patient is the gainer through the increased power which the physician possesses.

A united and organized profession will be able to more effectually study the great problems of scientific interest.

Every honorable medical practitioner in the United States who is eligible to membership in the medical society of his county should ally himself with the organized body and become an earnest, active member. He thus aids an association that will help him.

Every physician owes it as a duty to himself, to the society of the county in which he lives; he owes it to the whole organization as a profession of which he is a member; and he owes it especially to his patients who call him and confide in his ability to give them the recognized advantages which modern medical knowledge promises.

If a physician wishes to raise the query, does it justify him in becoming a member of and taking an active part in the work of a local medical society? let him look at the members of the medical profession throughout the United States, throughout the world, and observe where the great thinkers, the prominent and most successful practitioners, the leaders in the profession stand in regard to society work. He will observe that all of them are active in their local society work. There, all new thoughts or discussions are first presented. If such men are justified in expending time and means in the work of the medical society, the encouragement should apply to every prac-

itioner. Dr. J. B. Donaldson, in an address before the Medical Society of Washington County, Pennsylvania, quoted in *The Pennsylvania Medical Journal* for August, 1902, in an editorial, "Membership in County Societies," said: "To meet the medical men of our county is a treat that you can not afford to dispense with; it is a legitimate excuse to get 'out of the rut' and take a day off, that will do you good, socially as well as scientifically."

On the other hand, where do we find the charlatan? Isolation suits him best; he prefers secrecy for all of his methods of alluring the unwary. The more isolated a man becomes in his work the more narrow and egotistical he becomes in his views.

The American Medical Association in its reorganization plan, with the affiliated state and county societies, has in view the enlistment of every eligible regular practitioner in the Union. This should receive the thoughtful consideration of all practitioners who are not already members of a society, as well as encouragement of those who are already thus connected.

In 1903 the American Medical Association will meet at New Orleans. This will present again the opportunity for the practitioners of the southern states to be present at this scientific body, and to watch and take an interest in its proceedings. Let those who are eligible to membership in county societies secure such membership at once, that they may thus be in position to secure membership in the National Association and be entitled to attend the meeting next year.

Let as many physicians of the south as possible plan their arrangements that they may be present at the meeting and go prepared to help make it one of the greatest and most successful meetings in the history of the Association.

Association News.

The New Orleans Meeting.

To show that the profession of New Orleans is actively at work to make the next session of the American Medical Association a successful one, we copy the following from the December number of the *New Orleans Med. and Surg. Journal*:

The local Committee of Arrangements held a meeting, November 15, at the New Orleans Polyclinic, with the following members present: Dr. Isadore Dyer, Chairman; Drs. John Callan, Finance Committee; E. S. Lewis, Postoffice Committee; E. Souchon, Transportation Committee; Q. Kohnke, Exhibits; H. B. Gessner, Badges; R. Matas, Registration; J. F. Oechsner, Halls; F. A. Larue, Publication. Besides there were Dr. J. B. Guthrie, Secretary of the Committee, and Drs. C. J. Miller and E. Moss, representing other sub-committees.

The Chairman called attention to the purpose of the meeting as crystallizing the plans for the coming meeting of the Association. He stated that all of the committees had been organized and were well under way. He had communicated with each of the sections, and the secretaries of most of these had advised him of the probable attendance of each and the likely number for the banquet. Southern journals had been circularized with an idea of developing attendance through the Southern states.

Dr. Callan reported that the Finance Committee had held several meetings and had decided to issue a circular to the lay public, about December 1, appealing for contributions and stating the importance and character of the convention in May. The medical profession were to be circularized by the respective arrangements committees of the Association and of the State Society. It was decided to name a representative of the Association in each of the Congressional Districts in the state in order to derive contributions from that source. This plan had been agreed upon because of the proffer of assistance from country members who were anxious to share the honor and burden of the entertainment.

Dr. Gessner reported for the Committee on Badges that he had secured designs and prices from several manufacturers, which he submitted for the advice of the general committee. He had been unable to get any information from the 1902 committee, but he had secured a sample of the badge and souvenir of the St. Paul meeting. After some discussion it was decided that the committee be authorized to further investigate designs and to secure bids on 5200 badges at a price not to exceed

\$800. It was the sense of the committee that the souvenir should be suggestive of New Orleans, and at the same time of sufficient attractiveness to be taken away as a token of the city.

Dr. Oechsner, for the Committee on Halls, presented a very interesting report, showing the capacity in floor space and seating of the several available halls in the city and elaborating the plan of disposition of the several sections and bodies requiring accommodation. The work of this committee practically disposed of the plan of the meeting, and it was agreed that, unless strong reasons were advanced to the contrary, the meeting should be held in the section of the city including Tulane Hall, Tulane and Crescent theaters, Orleans Parish Medical Society, the Polyclinic, Medical College, Charity Hospital, Grunewald Hotel, as these afforded ample seating accommodations as well as space for exhibits, etc.

Dr. Parham reported that the Committee on New Membership had already begun circularizing neighboring states and that some 6000 eligibles would be reached within the next few weeks. Already a large number of members had been enlisted in Louisiana.

Dr. E. S. Lewis reported that the Postoffice Committee had conferred with the Postmaster of New Orleans, who had promised to supply alphabetically arranged boxes for the distribution of mail, which was to be delivered at the Bureau five times a day.

Dr. Martin reported, through Dr. Moss, for the Committee on Hotels and Boarding Houses, giving the hotel capacities and relating that a systematic bureau of information would be established regarding boarding houses, a list of which was already being made. At the recent bankers' convention this system had been used and had been found satisfactory.

Dr. Matas reported for the Committee on Registration that he had received full instructions from the treasurer of the Association, and that as soon as the location of this department had been determined, the work of his committee could be easily planned and executed.

At the adjournment of the committee meeting the members of the several sub-committees agreed to elaborate the work of each for a meeting to take place in January. Altogether it may be seen that the Arrangements Committee has the matter well in hand, and that early in the year the plans will be practically complete.

Societies.

COMING MEETING.

Western Surgical and Gynecological Association, St. Joseph, Mo. Dec. 29 and 30.

Philadelphia County Medical Society, North Branch.—This organization, at its recent annual meeting, elected Dr. H. Brooker Mills, chairman, and Dr. Frank C. Hammond, clerk.

Mercer County (Ky.) Medical Society.—Physicians of Mercer County met at Harrodsburg, November 18, and organized a county medical society, with Dr. Henry Plummer, Harrodsburg, president, and Dr. J. M. English, secretary.

Butler County (Mo.) Medical Society.—Ten of the fourteen physicians of Poplar Bluff met in that city, November 14, and organized this society, with Dr. Benjamin C. Jones, president; Dr. DeWitt F. Eskew, vice-president, and Dr. Gervaise L. Johnson, secretary.

South-Eastern Iowa Medical Society.—The thirty-second annual meeting of this society was held in Fairfield, November 20. Dr. George B. Little, Burlington, was elected president and Dr. Carl Stutsman, Burlington, secretary. The next meeting-place is to be Muscatine.

Penobscot County (Me.) Medical Society.—The annual meeting and banquet of this society were held in Bangor, November 18. Dr. Daniel McCann was elected president; Dr. Daniel A. Robinson, vice-president, and Dr. Bertram L. Bryant, secretary and treasurer, all of Bangor.

South Kansas Medical Society.—This society met for its annual session in Wichita, November 18 and 19. Dr. David W. Basham was elected president; Dr. Walter H. Graves, first vice-president; Dr. J. D. Clark, second vice-president; Dr. George K. Purves, secretary, and Dr. Arch D. Jones, treasurer, all of Wichita.

Jefferson County (Ohio) Medical Association.—The physicians of Jefferson County met at Steubenville, November 18, and reorganized this association, with Dr. Enoch Pearce, Steubenville, president; Dr. Hezekiah W. Nelson, Steubenville,

vice-president; Dr. J. Webster Collins, Toronto, secretary, and Dr. Joseph Robertson, Steubenville, treasurer.

New York State Association of Railway Surgeons.—The twelfth annual meeting of this association was held in New York City, November 21. The following officers were elected: President, Dr. Henry Flood, Elmira; vice-president, Dr. Charles J. C. Finn, Hempstead; secretary, Dr. George Chaffee, Brooklyn; and treasurer, Dr. James K. Stockwell, Oswego.

Middle Tennessee Medical Society.—At the annual meeting of this society held in Sparta, November 21, Dr. Rufus E. Fort, Nashville, was elected president; Dr. William B. Young, Bon Air, vice-president, and Dr. Leonard E. Ragsdale, Columbia, secretary and treasurer. Clarksville was selected as the next place of meeting.

CALIFORNIA ACADEMY OF MEDICINE.

Regular Meeting, held Nov. 25, 1902.

Report of a Case of Bubonic Plague.

DR. E. L. WEMPLE (by invitation) reported the case of a white man 33 years of age, married, a clerk in a furnishing store on Third street (near the business center, and a long distance from Chinatown), whom he found, October 27, suffering from backache, stiffness of the limbs, a feeling of anxiety and restlessness and great systemic depression. He refused all food, was nauseated, and had been vomiting. The bowels had moved several times in the three preceding days. The patient dated all his illness from the night of October 24. From this time on he felt a tumor in the right groin, the pain soon became intense, temperature 103.8; pulse, 96; respiration, 30. The tumor felt like a large mass of swollen glands in the femoral region; but as there was another above Poupart's ligament Dr. Wemple was in doubt as to its true nature, and advised that the man be taken to the hospital, where he would remove the mass. At 1:30 p. m. on the same day, October 27, he operated, and, cutting into the tumor, found it to be composed of large lymphatic glands, many of them hemorrhagic and not unlike placental tissue in appearance. There was an edematous condition of the skin and underlying structures from which oozed a glistening serum. He dissected out the glands from the pubic portion of the fascia lata, when he found that the swollen chain extended up into the pelvis. Suspecting that it might be a case of bubonic plague he had the patient quarantined. Smears from the glands showed *Bacillus pestis*, there being a diplococcus infection as well. The diagnosis was bacteriologically confirmed by the inoculation of a guinea-pig, by Dr. M. J. White of the United States Plague Laboratory.

The next day, October 28, the patient was removed to the City and County Hospital and quarantined. During this day 20 c. c. of Yersin's serum were given.

October 29, temperature 102.2 to 102.8; pulse 98 to 125; delirious; pain in back and abdomen; 20 c.c. of Yersin's serum given.

October 30; temperature 102.3 to 104; pulse 108 to 120; respiration 30 to 34; delirious; 40 c.c. of Yersin's serum at 4 p. m. At 11 p. m. 120 c.c. of serum intravenously in each arm; after this 80 c.c. more were given with no effect.

October 31, temperature 104.8; pulse 150; respiration 30; at 8 a. m. temperature 102.4; pulse 110; respiration 30. This latter was after 60 c.c. of serum had been injected and the bowels moved with calomel. Twelve, noon, temperature 104.4; pulse 130; respiration 32; 1/10 of a grain of strychnin was given from 2:30 a. m. to 8 a. m.; 1/10 of a grain of strychnin and 1/30 of atropin were given between 12 and 5 p. m. Unconscious, 5:30 p. m.; 5:50 p. m., temperature 108.4; pulse 170; respiration 43; 20 c.c. of serum given. Death 6:15 p. m.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, held Sept. 24, 1902.

The President, Dr. T. H. Fenton, in the Chair.

Intussusception in a Child.

DR. MORDECAI PRICE reported a case of "Intussusception in a Child Thirteen Years Old; Operation and Recovery." The patient had suffered with dysentery for five summers, and, when seen, had had dysentery for three months. There was

agonizing pain with emaciation. No positive diagnosis was made. On opening the abdomen, much of the ileum was found telescoped into the large bowel throughout almost the whole length of the latter. There was a large mass in the sigmoid at the brim of the pelvis. In the reduction of the condition the ileum was so badly injured that much of it was resected and the small bowel was inserted into the colon by use of a Murphy button five inches above the caput coli. The latter was amputated. Operation was done in July, 1902. Recovery was rapid and complete.

Dr. Price also briefly reported a case of polyhydramnios which he had recently delivered. Distention had been very great; there had been vomiting of blood and great emaciation. The pregnancy was 8½ months advanced. Partial dilatation of the cervix was accomplished with the hand, but the latter could not be inserted into the uterus, because of the intense intra-uterine pressure, until the membranes had been ruptured and a part of the amniotic fluid allowed to escape. The amniotic fluid measured 3½ gallons. Recovery was good.

Symposium on Typhoid Fever—1. Hemorrhage.

DR. R. G. CURTIN read a paper entitled "Hemorrhage in Typhoid Fever." The etiology is hard to explain. He thinks that the more profound the toxemia and the greater the blood changes the deeper will be the sloughing. He had never seen hemorrhage in a patient under 6 years; it is rare in children and when it occurs is rarely fatal.

It should be remembered that a patient may die without external signs of hemorrhage. The amount of blood loss may be estimated by the fall of temperature and depression. Those with most severe symptoms sometimes recover. The associated conditions most serious are renal disease, organic heart disease, hemophilia, tympanitic condition of the abdomen, obstinate diarrhea and vomiting. Treatment is believed to be usually more or less valuable. Following are some of the remedies advised: Ergot; turpentine externally and internally; oil of erigeron when the stomach will bear; mineral and vegetable astringents; ice externally and in the bowel, employed continuously; suprarenal extract the author has used with good effect; elevation of the foot of the bed; ligatures about the limbs. The speaker, in 1893, reported 17 cases with a mortality of 5. More recently he reported a series of 43 cases with a mortality of 23. The recent increase in mortality is ascribed to the cold water treatment. It is believed that the number of cases has also been increased. The effect of the sudden chilling is believed to congest the internal organs and thus increase the liability to hemorrhage. The speaker cited several cases in which he believed the cold bath or sponge to have been the immediate cause of hemorrhage.

2. Pain in Typhoid.

DR. H. B. ALLYN presented a paper: "Significance of Pain in Typhoid Fever." Pain was classified as extra-abdominal, due to hyperesthesia and hysteria, and as abdominal, due to intestinal colic, entero-colitis, cholecystitis and peritonitis either with or without perforation. The speaker dwelt on cholecystitis as a common complication, and believes that recrudescences often ascribed to indigestible food are really not infrequently due to this complication. Clinical cases were cited. Pain indicating perforation of the bowel is most serious. Tenderness and muscular rigidity are usual symptoms of this condition, but pain, often in the right lower quadrant of the abdomen, is the only constant symptom. Confidence was expressed in the value of the frequent skillful blood-counts regarding leucocytosis, especially as helping to diagnose complications. Pain and tenderness are not necessary accompaniments of typhoid fever, but should be regarded as danger signals.

3. Operation in Typhoid Perforation.

DR. R. G. LE CONTE advocated prompt operation following diagnosis of perforation. The peritonitis of typhoid perforation is much more rapid and widespread than that of appendicular perforation. Fatal result from operation may usually be attributed to one of two causes, namely, delay in operating, or surgical errors of judgment or technic. To prevent delay in operation, three things are essential: first, Osler's advice

must be followed and all our past cases of perforation carefully studied, that light may be thrown on the early diagnosis of this condition; second, in a hospital, consent for operation should habitually be obtained for all cases of typhoid fever; and third, the surgeon should be called at once in probable cases. It is too late when the diagnosis is made certain by signs of peritonitis.

Surgical errors of judgment and technic are discussed under four headings: 1. Shock; immediate operation is advised even in profound shock. 2. Incision is recommended in the right semilunar line as 85 to 90 per cent. of perforations will thus be exposed. 3. Treatment of the lesion. Where simple closure is possible, interrupted Lembert mattress sutures are advised. When closure is not practicable walling off the infected area by gauze is advocated. Resection of the bowel or formation of an artificial anus are methods for exceptional cases. Sometimes a single large opening may be plugged with a piece of omentum. 4. Peritoneal toilet and drainage. When peritoneal infection is limited to the right lower quadrant of the abdomen, it is recommended that the infected coils of intestine be brought outside of the abdomen and cleansed with salt solution and gauze sponges, while the cavity within is sponged dry without flushing, and then free drainage assured with gauze strips and a tube leading to the pelvis. If, however, the peritonitis is extensive or universal, a supplemental median incision should be made, permitting considerable evisceration and copious douching, followed by free drainage. The patient's head should be maintained elevated, so that the fluid may gravitate to the pelvis, the least absorbable part of the peritoneum and most readily drained. The fact was cited that the average typhoid patient stands a short operation well, but that prolonged operation is attended with grave risks. Therefore, the simplest and shortest surgical procedure that is consistent with recovery should always be employed.

4. Feeding in Typhoid.

DR. WM. EGBERT ROBERTSON believes that the dietetic management of typhoid fever has been given too little attention. Very few statistical reports dealing with large numbers of cases have been made. The laboratory work of Pawlow and his pupils in St. Petersburg is of importance. They showed that both a psychical and a chemical secretion of the digestive glands takes place and that the former actually stimulates the latter. So, by tempting the appetite, a variety of food can be given in an effort to stimulate the desire for food; for food taken willingly, or especially with pleasure, is more apt to be digested and assimilated than when a food repugnant to the patient is forced on him. A fairly large postmortem experience on the part of the speaker has shown him that, no matter what the diet, except milk, the small bowel always contains liquid feces only, and that formed material is found only in the colon. When milk alone is allowed, or when it constitutes the bulk of the food, it is often found in putty-like masses all along the alimentary canal. Even when milk is well taken and assimilated, the wasting and exhaustion are pronounced, while in those well fed, this condition is usually absent. In fact, in well-fed cases, the condition which gave the disease its name is almost totally wanting, and convalescence is short. Of course, we can not expect to shorten the febrile period, but the time of total disability can be materially shortened. We have no remedy for the disease, and all our efforts must be directed toward the dietetic and hygienic management.

While he would not advocate a full diet, the following can be administered, not only without fear of harm, but with beneficial results: Eggs, raw or cooked, cereals, bread and butter, salad, well-cooked spinach, potatoes, macaroni, soups, gelatin, jellies, custards, all beverages such as tea, coffee, chocolate, etc., ice cream, and chicken. On such a diet the patient is able to combat the wasting, the liability to complications is lessened, and convalescence is shortened. Of course, in gravely toxic cases and to the comatose, only liquid food, if any, can be given.

Discussion on Typhoid Fever.

DR. G. G. DAVIS referred to the possible independent onset of appendicitis in typhoid. A plea was made for the support of the surgeon by the physician in doing early operation in perforation.

DR. HOBART A. HARE said he could not conceive how any ordinary styptic remedies can reach the seat of hemorrhage. He is convinced that Nature is always the chief factor in the arrest of such hemorrhage. Monsel's salt enclosed in several layers of capsules, he believes the only possible efficient remedy of this class. Exceptions were taken to those who believe in assuming chances in operating when perforation can not be positively diagnosed. Cases were mentioned in which operation being refused, recovery showed either a walling off of infection, or that no perforation had occurred. Operation in such cases may have proved fatal. The speaker has seen patients early in typhoid with all the symptoms of appendicitis.

As to feeding, the speaker expressed himself in favor of a more liberal diet than is often used. He believes in excluding meats and meat broths because they are good culture media, but favors giving soft eggs and strained thin starches, with some starch digestive ferment.

DR. MORDECAI PRICE expressed belief in the easy differential diagnosis of appendicitis and typhoid fever. Gangrenous appendicitis is the only variety simulating typhoid fever and it is rapid in onset. He believes in the median incision in operating for perforation, and believes in washing the peritoneal cavity with plain water, not with salt solution.

DR. JOHN H. GIBSON urged early operation, because general peritonitis means fatality. Of 11 cases operated on at the Pennsylvania Hospital, 4 had recovered.

DR. B. F. STAHL favors granting the demand which typhoid patients make for a variety of food, giving especially meat foods or starches. He likes sterile meat broths, especially one made at 167 F. or less, to which hydrochloric acid is added. He advises the use of several of the limitless variety of ways of preparing milk.

DR. WM. L. RODMAN considers hemorrhage as a surgical condition. Following surgical principles, he believes in the intestinal injection of water at 110 to 115 F. This may control hemorrhage; it at least combats shock. Rarely, he believes, is there a spontaneous cure following perforation. Whereas by operation perhaps 25 per cent. can be saved. A certain parallelism was pointed out between the condition of typhoid perforation and gunshot wound of the intestines—the two conditions demanding similar treatment. The speaker coincides mostly with the views of Dr. Le Conte, except that he believes in flushing the infected peritoneum rather than wiping it out.

DRS. CURTIN, ALLYN, ROBERTSON and LE CONTE closed with very brief remarks, the latter explaining that, if, in operating for perforation, he finds general peritonitis, he flushes the cavity freely; if only a few coils of intestine are infected, having drawn such coils outside the abdomen, he flushes them, afterward returning them, and always providing for free drainage.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Stated Meeting, held Nov. 17, 1902.

The President, Dr. Alexander Lambert, in the Chair.

Unscientific and Careless Prescribing; Secret and Proprietary Remedies.

DR. HARRY R. PURDY called attention to many common errors in prescribing, occurring even with physicians who were capable and well-informed on other matters. He could only account for this on the ground that our medical schools had neglected to give proper instruction in pharmacy and pharmacology. There had been some improvement, but there was still room for much more, the so-called courses in these branches being wholly inadequate for the needs of the modern physician. The speaker inveighed against the increasing tendency for physicians to do their own dispensing, claiming that it led to unscientific and undignified prescribing, and that many of the tablets employed contained inferior drugs or those which by reason of age had largely lost their potency. He characterized those physicians who prescribed patent medicines as self-confessed incompetents and violators of the Code of Ethics.

DISCUSSION.

DR. E. ELIOT HARRIS took issue with the author in the classing together of patent medicines and proprietary medicines,

maintaining that, at the present time, a patent medicine is one, the working formula of which has been filed with the patent office. This formula is not a fake, but will enable any competent pharmaceutical chemist to reproduce the medicine. Proprietary medicines are essentially secret preparations, although the manufacturers of some of them will state the ingredients, though refusing to divulge the particular mode of manufacture.

DR. FREDERICK HOLME WIGGIN reinforced the position taken by the last speaker, and called attention to the fact that the New York State Medical Association is making an honest effort to keep the advertising columns of its publications free from objectionable matter by living up to the distinctions just laid down. He has not found the tablet medicines inert or unreliable. They are certainly useful in that they enable the physician to properly control the prescribed medication.

DR. GEORGE D. STEWART saw no occasion to take a pessimistic view, while admitting the need of a more liberal education in pharmacology. The older physician, who had not had the advantage of such instruction, should narrow his materia medica down to a few drugs, the nature and actions of which he knew most thoroughly.

MR. THOMAS J. KEENAN, speaking for the pharmacists, said that the latter view with alarm the growing tendency among physicians to prescribe proprietary articles. That there is such a tendency was well shown by taking at random, as he had done, 50 prescriptions from the files of a drug store, for the year 1882, and a similar number for 1901. Of the first fifty, 48 were found to be for official preparations; of the second fifty, no less than 41 were for proprietary articles.

DR. JAMES J. WALSH gave a number of examples of the danger arising from recommending to the laity in an informal way various remedies.

DR. E. MAXER was disposed to think that the pharmacists themselves were largely to blame for the present attitude of the profession toward prescriptions; in any case, one should carefully distinguish between elegant and ethical pharmaceutical preparations and those made only for money-making.

DR. E. V. DELPHEY spoke at length of many well-known proprietary preparations, mentioning them by name, and pointing out how little they had to commend them to the careful and conscientious physician.

MR. JAMES TAYLOR LEWIS remarked that if the formula of a patent medicine on file in the patent office proved not to be the correct working formula of that medicine, the patent on the same was void.

The Venous Hum in Relation to Blood Count.

DR. C. N. B. CAMAC reported 22 cases of anemia, in 21 of which the cervical bruit was audible. He said that while it was generally assumed that this bruit arose from a diminution in the caliber of the vessel and the consequent formation of "a fluid vein," certain recent experiments of Potain gave renewed emphasis to the older theory based on the thinness of the blood. The cases observed by the author were divided into the following groups: 1. Those in which there was a cervical bruit and hemoglobin percentage of 90 or over. 2. Those in which this bruit was associated with a hemoglobin percentage of 75 to 90 per cent. 3. Those in which the bruit was present with a percentage of hemoglobin of less than 75, and 4, cases in which there was no cervical bruit, and the hemoglobin percentage was below 75. Of the 22 cases, 21 had the cervical bruit. There were 15 cases belonging to the first, 2 to the second and 6 to the third group.

CHICAGO MEDICAL SOCIETY.

Regular Meeting, held Nov. 19, 1902.

The President, Dr. Wm. A. Evans, in the Chair.

Case of Ventrofixation, Pregnancy, Inversion of the Uterus, Death and Autopsy.

DRS. WM. E. HOLLAND and BYRON ROBINSON presented jointly a case of ventrofixation, followed in two years by pregnancy. At full term there was a short normal labor and delivery. Death occurred three and a half hours postpartum. The autopsy revealed complete inversion of the uterus. The

uterine circulation was injected *in situ* with red lead, the uterus removed, and an x-ray of the specimen secured. The authors presented observations and deductions concerning the relation of the ventrofixation to inversion of the uterus.

DISCUSSION.

DR. CHARLES E. PADDOCK propounded the question: "Why is it we find so many cases of inversion of the uterus now, when there were so few formerly?" He believes it is due largely to a misunderstanding of the Credé treatment of the third stage of labor.

DR. RUDOLPH W. HOLMES said that some years ago he presented a paper on the "Etiology of Inversion of the Uterus." He collected at that time 830 cases, 75 per cent. of them being due to spontaneous causes; 25 per cent. were due to the Credé method and to traction on the cord. He thinks abdominal pressure is the direct cause of the inversion in the larger proportion of cases.

DR. A. McDERMID said he performed the operation of ventrofixation on a patient some three years and a half ago. In listening to the report, he thought it was believed atrophy had occurred, owing to the method of fixation adopted, and that the atrophic band had inverted the uterus. When the uterus is fixed by any method to the abdominal wall, the anterior wall of the uterus during gestation, not being allowed to expand, becomes thick and dense, while the posterior wall becomes attenuated, and he thinks it is rare that the posterior aspect of the fundus is so attenuated that it is liable to cause inversion. The speaker had used the modified method of fixation of Martin of this city.

DR. C. S. BACON said it is hardly fair to attribute the inversion to the ventrofixation, and gave his reasons for so thinking.

DR. FRANKLIN H. MARTIN described a method of ventrofixation which he had used in 173 cases. Of this number only 30 were women who could bear children, and of these 30, 2 had children within one year to two years, after the fixation had been made. These women went on to term, were confined in a normal manner, and made no complaint. In each of these cases he had examined the uterus afterward and found it suspended.

DR. C. W. BARRETT thinks that ventrosuspension or fixation should be reserved for those cases in whom pregnancy may not occur afterward. He believes the weight of clinical evidence is tending that way.

The Gravity of Bronchitis in Elderly Men and the Safety Valve Action of Relative Tricuspid Insufficiency.

DR. ROBERT H. BARCOCK reported a case and drew the following conclusions:

1. Bronchitis in elderly, although robust, men may readily become chronic. Presuming on their previously good health and vigor, they think they can easily throw off their colds, and hence are apt to ignore medical aid until after the bronchitis has become settled and obstinate.

2. The cardio-vascular degenerations so often present and unrecognized in elderly men increase the tendency of bronchitis to become chronic. This is because the stiffened arteries and chronic myocarditis, even though the heart remains potentially equal to the demands of everyday life, tends to the production of pulmonary and bronchial congestion, which, when bronchitis once sets in, renders it less amenable to ordinary treatment. Moreover, the physician who may, perchance, be consulted is apt to overlook the influence of cardio-vascular changes, and contents himself with prescribing expectorants, whereas he should at the same time lessen the congestion by a brisk calomel cathartic. He should also, in many cases, inhibit exercise and attention to business, that the heart may be relieved of unnecessary strain.

3. Another element of danger in the bronchitis of elderly men is pneumonia. In most cases the bronchitis predisposes to a pneumonia, which may develop after the lapse of weeks or months, as in the case narrated. There is, however, the possibility that the bronchitis, which sets in abruptly and severely, may be but an attendant or manifestation of pneumococcus infection, and may obscure the signs of pneumonia when this is lobular.

4. A fourth danger lies in the effect of the bronchitis on the heart. Chronic myocarditis develops so insidiously that one may not always be able to detect it, and can not foresee how little extra strain may be required to seriously impair its potential strength.

Even should pneumonia not ensue, the mechanical strain of the bronchitis, especially if it leads to atelectasis and emphysema, and of repeated violent attacks of coughing, is capable of seriously damaging the degenerated right ventricle, the dilatation of which aggravates the already existing congestion.

5. Should such dilatation lead to relative tricuspid insufficiency, this is not to be regarded as a sign of danger *per se*, since it is in reality a safety valve which for a time protects the ventricle from disastrous over-distention. The tricuspid regurgitation is a criterion of the degree of mechanical strain to which the ventricle is subjected.

6. Such safety valve action not only furnishes a brief respite to the patient from the death threatening him, but affords to the physician a little longer interval in which to battle for victory, while it, at the same time, indicates the necessity of relieving dangerous congestion by cathartics, possibly also venesection, and cardiac tonics.

Circular Insanity.

DR. RICHARD DEWEY reported a case of circular insanity which he had studied clinically, differentially and medicolegally, and which will be published in *THE JOURNAL* later.

Ankylostoma Duodenale.

DR. JOSEPH A. CAPPS reported a case of ankylostoma duodenale. He gave the life-history of the parasite, described the modes of infection, and demonstrated specimens illustrating different phases of development, and then discussed the diagnosis and treatment.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Acne.

Dr. Leredde, in *Rev. de Ther.*, recommends, in the treatment of the various forms of acne, and the lichens, employing methods that will produce exfoliation of the epidermis and the mucous layer with subsequent desquamation, which results in carrying off the pathologic products. To accomplish this purpose, he employs strong alkaline soaps, resorcin, salicylic acid and beta-naphthol in the following combinations:

R. Zinci oxidī	5iiss	10
Resorcini	3x	40
Adipis benzoin.	5i	30

M. Sig.: Apply to the face once a week after washing the face with soap and water; or:

R. Beta-naphthol	5iiss	10
Sulphuris precip.	5iiss	45
Saponis viridis	3vi	24
Petrolati	5vi	24

M. Sig.: Apply locally; or:

R. Acidi salicylici		
Beta-naphthol, āā	gr. lxxv	5
Resorcin	5iiss	10
Sulphuris		
Amyli, āā	5vi	24
Saponis viridis	5iv	16
Petrolati	5vi	24

M. Sig.: Apply locally.

Or, in the form of a lotion as follows:

R. Tinct. saponis viridis (20 per cent.)	3x	40
Resorcin	5i	4
Sulph. precip.	5iiss	10

M. Sig.: Apply locally once a day for three days.

The author states that the paste, whichever one is used, may be allowed to remain in place for fifteen minutes in the beginning, gradually increased to thirty-five minutes in order

to gauge the reactive power of the skin. The foregoing lotion may be applied, as stated, daily for a few days.

The resulting inflammatory reaction may be tempered by means of the following salve:

R. Zinci oxidī		
Petrolati, āā	5iiss	10
Adipis laurē	5ss	15

M. Sig.: Apply locally.

Dressing for Wounds, Especially Bullet Wounds.

Paul von Bruns, professor of surgery in Tübingen Univ., recommends in the treatment of wounds, especially bullet wounds, a salve containing xeroform, combined as follows:

R. Xeroform	5iiss	10
Mucil. acacie		
Glycerini, āā	5v	20

M. Sig.: Apply locally as a dressing, substituting iodoform and salicylic acid powders.

Xeroform is the tribromophenol of bismuth. It is an odorless, tasteless, yellowish-green powder, employed externally as an antiseptic surgical dressing.

Herpes Zoster.

The object of treatment in herpes zoster, according to an abstract in *Med. News*, is to cure the vesicles, to prevent the suppuration and to quiet the neuralgic pains. The following combinations are recommended for local application:

R. Acidi tannici	gr. vii	45
Olei olivæ	5v	20
Cera flavæ	5iiss	10
M. Ft. unguentum.		
M. Sig.: Apply locally; or:		
R. Acidi borici	gr. xl	265
Cocainæ hyd.	gr. viii	50
Petrolati	5vss	22

M. Sig.: To be applied locally.

If gangrene or suppuration should make its appearance, wet compresses should be applied, followed by powdering with iodol or iodoform.

For the pain one may employ morphin, chloral, belladonna and quinin hydrobromate.

The following is recommended by Shoemaker:

R. Ferri pyrophos.	gr. xxx	2
Acidi arsenosi	gr. i	06
Quin. sulph.	gr. xxx	2

M. Ft. pil. No. 30. Sig.: One pill three times a day; or:

R. Tinct. nucis vom.		
Tinct. gelsemii, āā	m. lxxv	5

M. Sig.: From five to ten drops four times a day.

Diphtheria.

Patterson, in *South. Med. Jour.*, recommends the following in the treatment of diphtheria:

R. Pot. chloratis	gr. xv	1
Acidi muriatici dil.	5i	4
Tinct. ferri chloridi	5iiss	6
Aq. destil.	5vi	180

M. Sig.: Two tablespoonfuls in water every hour for adults and proportionately less for children.

Dysmenorrhea.

The *Med. Press and Circular* states that the inefficacy of the treatment of dysmenorrhea is shown by the multiplicity of remedies recommended. The statement is made, however, that beneficial results have been obtained from the administration of thyroid extract in dysmenorrhea owing to the intimate relationship which exists between the utero-ovarian zone and the thyroid gland. It is stated that Dr. Stinson of San Francisco has been successful in 80 per cent. of his cases. He administers a grain of the dried extract three times a day for one or two days preceding the menstruation and doubles the dose during the period.

Fisher, in an abstract in *Amer. Med.*, calls attention to the intimate association between the genital apparatus and the thyroid gland. He states that occurrences which influence the genital tract, such as puberty, pregnancy, and uterine fibroids, very frequently cause enlargement of the thyroid gland. He

also notes that deficiency of the normal thyroid secretion is often accompanied by atrophic changes in the genital apparatus. Consequently, it seems from the foregoing statements that thyroid extract is deserving of a place in the treatment of dysmenorrhea.

Edema of the Glottis.

The following combination is recommended by *Le Prog. Méd.* in the treatment of edema of the glottis:

R. Aluminis	
Acidi tannici, āā	gr. lxxv 5
Ext. krameriae	3iiss 10
Aquæ, q. s. ad.	Oi 500

M. Sig.: To be sprayed into the throat by means of an atomizer five or six times a day.

Appendicitis.

T. R. Brunton, according to the *Med. News*, recommends the use of sodium salicylate and belladonna in large doses in the treatment of appendicitis. He recommends sodium salicylate in fifteen or twenty grain doses, alternating with ten or fifteen drops of the tincture of belladonna, every two hours for a limited number of doses. It is not wise to mix them because it is important to stop their administration just as soon as the symptoms of intolerance arise or at any rate to decrease the size of the dose.

Turpentine in Scarlet Fever.

Tobeitz, in an article on the pathology and treatment of scarlet fever, according to *Archiv f. Kinder.*, recommends the use of turpentine in this disease. He states that instead of its producing an inflammatory condition of the kidneys it cures albuminuria and prevents nephritis. He uses it in the form of an injection hypodermically, given in fifteen minim doses (1.00) injected into the outer aspects of the thigh, followed two days later by twenty drops given internally in capsule, on sugar or in the form of an emulsion.

Acute Alcoholism.

The insomnia and intense nervousness, according to an abstract in *Ther. Monthly*, which frequently accompany acute alcoholism, should be corrected by promoting free elimination from the bowels, skin and kidneys. A brisk laxative in the form of Hunyadi water, seidlitz powder or magnesium citrate should be given, also a turkish bath, if not too depressing. Sodium bromid should be preferably used as a sedative and hypnotic. The author does not favor the indiscriminate use of bromids, chiefly because of the danger of producing gastric disturbance.

A mixture similar to the following is recommended:

R. Chloralis hydratis	
Sodii bromidi, āā	gr. xv 1
Tinct. capsici	m. x 65
Aq. menth. pip.	3ss 15

M. Sig.: At one dose.

The author, however, prefers paraldehyd as a hypnotic combined as follows:

R. Paraldehyd	3ss-3i 2-4
Olei olivæ	3ss 15

M. Sig.: At one dose to produce sleep.

Paraldehyd is said to produce sound, refreshing sleep, with no depressant after-effects. Food should be withheld until the bowels move freely.

Chorea.

The following combinations are serviceable, according to Yeo's *Man. of Ther.*, in the treatment of chorea:

ZINC OXID.

R. Zinci oxidi	gr. iii-vi 20-40
Sacch. albi	gr. lxxv 5

M. Ft. chart. No. i. Sig.: One such powder three times a day; or:

SODIUM ARSENATE.

R. Sodii arsenatis	gr. iss 09
Acidi carbol.	m. iii 20
Aquæ destil.	3iiss 10

M. Ft. solutio. Sig.: Five minims as an initial dose and repeat, according to age.

ASAFETIDA.

R. Asafetida	
Ext. valerianæ	
Zinci oxidi	
Castori pulv., āā	gr. xx 1 30
Ext. belladonnæ	gr. ii 12

M. Ft. pil. No. xx. Sig.: One or two night and morning.

IRON AND ARSENIC.

R. Tinct. ferri chloridi	3ii 8
Liquoris arsenicalis	3iii 12
Glycerini	3i 30
Aquæ chloroformi q. s. ad.	3iv 120

M. Sig.: One small teaspoonful of water after food three times a day.

QUININ, IRON AND ARSENIC.

R. Ferri reducti	gr. i-iii 06-20
Quin. sulph.	gr. ii-v 12-30
Acidi arsenosi	gr. 1/50-1/30 0012-0020

M. Sig.: To be taken in pill or capsule three times a day.

Dr. Otto Maier, in *Ped.*, recommends the following in the treatment of chorea: Rest in bed, cold sponge baths twice a day, light nutritious diet, no excitement of any kind, and the following to be taken internally:

R. Pot. bromidi	3i 4
Sol. pot. arsenitis	3ii 8
Syr. simp.	3ss 15
Aq. fontis q. s. ad.	3iii 90

M. Sig.: One teaspoonful three times a day well diluted in water.

Acute Nephritis.

The following is recommended by *Le Nord Med.* in the treatment of acute nephritis:

Absolute rest in bed, the legs wrapped in cotton covered with oil silk; exclusive milk diet; a glass of milk and vichy water every two hours. Hot drinks to produce sweating, especially the infusion of juniper berries. Give saline purgatives to promote excretion by the intestine and the following to be taken internally:

R. Cinchonæ sulph.	gr. ii 12
Benzonaphthol	gr. v 30

M. Sig.: One such cachet to be taken three times a day

Medicolegal.

Property Not Damaged by Location of Pesthouse.—In the case of Barret vs. the City and County of Henderson, an action brought to recover damages for the alleged depreciation of certain property by the location of a pesthouse near same, the Court of Appeals of Kentucky affirms a judgment in favor of the city and county. On the trial it was proved by a number of witnesses that the value of the property was decreased by the location of the pesthouse fully \$20 to \$30 an acre. The city and county then introduced one witness, who said he had known the land all his life, and it was just as valuable then as it was before the pesthouse was built. Two other of their witnesses were of the same opinion, but another two thought the land had been damaged. The only question made on the appeal was, in substance, that the verdict in favor of the city and county was palpably against the evidence. The proof showed that the nearest pesthouse to the party's line was 474 feet from it, and something over 1,250 feet from his house. The other pesthouses were still further off. The proof also showed that the contagion of smallpox could not be carried through the air more than 100 or 200 feet. There was some proof that it might be carried further, but the great weight of the evidence was otherwise, and this was confirmed by the fact that no contagion had yet resulted from these pesthouses. Under these circumstances, all the court has to say is that a jury, selected as juries ordinarily are, when the facts were proven before them, were peculiarly qualified to pass on a question of this character; for as practical men they could form their own judgments on the facts, and the court does not think that it ought to disturb their finding.

Salary Only Recoverable by Health Officer.—As the Supreme Court of Mississippi describes it, the case of *Yandell vs. Madison County* was brought by a physician, as health officer of the county, to recover upon a *quantum meruit*, or as much as he deserved, namely, the sum of \$892, for medical services rendered to residents of that county. To the several counts, or different statements of his claim, three in number, all of like character, he attached a bill of particulars, containing about 93 items, one of which items, which will serve to illustrate all the others, was as follows: "1901, Jan. 14. To visit Jesse Samuel (smallpox), \$15.00." To his declaration, or entire pleading, a demurrer was sustained, when he filed an amended count in *quantum meruit* also, but for \$800. In the amended declaration no mention was made of the services performed, but it alleged that for the year 1900 his predecessor in office had received at the rate of \$500 per annum, which had been fixed at that sum by the board of supervisors, and that his (Yandell's) services were worth more than the services of his predecessor. His amended declaration further alleged that the board for the year 1901 had fixed the health officer's salary at \$100 per annum, but it made no use of that fact except to ignore it. In truth, all the counts ignored the fact that his compensation was a salary, to be fixed by the board, and sought to recover on a *quantum meruit* for special services to sick persons within the county. The court thinks that a demurrer was rightly sustained to all the counts, because the physician could claim against the county his salary only, whatever that might be; and for such recovery neither of his counts was a suitable pleading.

Skill Required of Physician—In Isolated Locality.—The Court of Appeals of Kentucky finds reversible error in certain instructions given the jury in the malpractice case of *Burke vs. Foster*, which the trial court decided in favor of the physician. The negligence charged was failure to discover and treat a dislocation of the arm at the shoulder joint. The parties lived in a somewhat isolated village, in a rural community, on the Kentucky river, but not on any railroad line. The number of physicians residing and practicing in that "vicinity" was not shown, but presumably they were not numerous. By the instructions referred to, the skill, attention, and prudence required of the physician were restricted to such as were exercised by "ordinarily skilful and prudent physicians and surgeons in that vicinity in treating a like injury." The Court of Appeals admits that it has held that a physician could not complain of such instructions, as, without saying more, they were as favorable to him as he was entitled to. It also says that there are some cases which have limited the physician's liabilities by this standard. Yet, so far as Kentucky is concerned, it is not aware of any reported case where it has approved of this doctrine. It says that it may be that in any given community—a rural one, sparsely inhabited—there may be only one or two physicians, and they may each be utterly incompetent, and be what is popularly termed a "quack." Should the law permit such a one to hold himself out as a member of this learned profession, and invite the confidence and reliance of those suffering from serious injuries and ailments, so as to engage his services, and then, though he is a mere bungler and an ignoramus, an empiric of the lowest degree, allow him to escape liability for his negligence and lack of skill on the plea that he and his associates in the profession in that community are all of a kind, and none of them have either sense, care or capacity? The mere statement of the proposition would seem to carry with it its answer. On the other hand, it must be recognized that the most efficient and talented in the profession generally, and very naturally, seek better and more lucrative fields for employment; that those living in a sparsely settled neighborhood will not have, in any probability, the experience, the opportunity for acquiring skill by practice in such cases, that comes to the practitioner of medicine and surgery in the city. It generally follows, then, that the practitioners in rural localities have not the same high degree of skill, knowledge or education that may be found in large cities and populous communities. As the physician engages to bring to bear on the case only such skill and care as is ordinarily practiced by others of the same profession in like situation, his liability should be measured by that standard.

Wherefore, the court thinks that the sounder rule is, not that the physician's skill and degree of attention should be measured by those of his community, but by such as is exercised generally by physicians of ordinary care and skill in similar communities. Furthermore, the court holds one of the instructions erroneous because it precluded a recovery, whatever the physician's negligence or lack of skill, if the result was as good as was usually obtained in like cases similarly situated. It says that it is known of all men that many cases of injury or illness are recovered from without any medical attention, while many others of the same kind do not recover, although apparently the best medical attention is given. What the proportions are might be impossible to determine. It is equally well known that two or more cases of apparent similarity, treated by the same treatment, and, indeed, by the same physician, may, and often do, have directly opposite results as to recovery. The court thinks, when a physician undertakes to give his attention, care, and skill to a given case of injury or disease, the patient is entitled to the chance for the better results that are supposed to come from such treatment, and as are recorded by the science of his profession to a proper treatment. That the patient might have died in spite of the treatment, or that "ordinarily" they did die in such cases (as formerly in cases of cholera, smallpox, etc.), is no excuse to the physician who neglects to give his patient the benefit of the chance involved in a proper treatment of his case. That no treatment would avail; or that ordinarily careful treatment would not, might be shown, if the case so warranted. In this case, the patient was entitled to an ordinarily careful and thorough examination of his injuries, such as the circumstances attending their infliction, the condition of the patient, and the surgeon's opportunities for proper examination suggested and allowed. If the dislocation was discoverable by such examination, and if the physician felt that because of lack of appliances or lack of experience he was unable to treat any peculiar feature of the injury, it was at least the right of the injured man to be apprised of his condition, that he might call in more skilled attention if he desired.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal, November 22.

- 1 *Ten Instructive Cases for the General Practitioner in Medicine, with Remarks upon the Detection and Relief of Eye-strain. Ambrose L. Ranney.
- 2 *The Prevention of Intestinal Diseases in Infants During the Summer. Charles G. Kerley and John L. Hughes.
- 3 *Rubber Gloves. Robert T. Morris.
- 4 A Special Type of Crookes' Tube for Therapeutic Applications of Roentgen Rays to the Cervix of the Uterus. E. W. Caldwell.
- 5 Three Cases of Shark Bite. J. A. Guthrie.

Medical Record (N. Y.), November 22.

- 6 *Repeated Ectopic Gestation. Brooks H. Wells.
- 7 *Typhoid Fever, Symptomatology, and Clinical Diagnosis. Charles E. Nammack.
- 8 *Monoplegia Disturbances of Sensibility in Cortical Paralysis. Sol G. Kahn.
- 9 Clinical Report on the Use of Argyrol (Silver Vitelline) in Diseases of the Nose, Throat and Ear. M. D. Lederman.
- 10 Relation of Consciousness to the Nervous System. Axel E. Gibson.
- 11 A Case of Multilocular Double Ovarian Cyst, Complicated with Carcinoma of the Descending Colon; Operation; Recovery. J. B. Boncher.

American Medicine (Philadelphia), November 22.

- 12 *The Surgical Treatment of Epilepsy. Roswell Park.
- 13 *The Pathology of Katabolism in Relation to the Etiology and Pathology of Cancer and Allied States. (To be continued.) Homer Wakefield.
- 14 A Nasopharyngeal Tumor, with Exhibition of Patient. G. Hudson Makuen.
- 15 *Remarks on Verbal Amnesia, Apropos of a Case of Sensory Aphasia. Alfred Gordon.
- 16 *Adenocarcinoma of the Male Breast. Frank C. Hammond.
- 17 *A Modification of Gersuny's Method of Paraffin Injections in So-called Saddle-Nose, to Prevent Disturbance of Muscular Action of the Nose. Francis Alter.
- 18 Venereal Diseases Among the Filipinos. E. F. Robinson.

Medical News (N. Y.), November 22.

- 19 *Obsessions: Fixed Ideas; Ideations; Imperative Conceptions; Abulias; Phobias. Theodore Diller.
- 20 *The Significance of the Terms Acute and Chronic. Allen J. Smith.

- 21 *Neurasthenia. Joseph M. Alkin.
 22 *A Study of Sex-Production in Man. Louis Kollipski.
 23 *General Remarks on Nasal Obstruction. John A. Donovan.
 Boston Medical and Surgical Journal, November 20.
 24 *Barber-Surgeons. (Concluded.) Frederic W. Taylor.
 25 *Tetany in Gastric Disorders. Lawrence W. Strong.
 26 *Notes on the Diagnosis and Treatment of Early Miscarriage. L. V. Friedman.
 Philadelphia Medical Journal, November 22.
 27 *Amputation Through the Shoulder-Joint as a Routine Procedure in Axillary Carcinoma. Secondary to Mammary Tumors. John B. Roberts.
 28 *The Radical Cure of Hernia, with Report and Analysis of 116 Cases. Frank Martin.
 29 Models for Demonstrating the Elementary Physiology of Vision. B. Alex. Randall.
 30 *A Case of Exophthalmic Goiter Presenting Some Unusual Features. Charles S. Potts.
 31 *What Cases of Pulmonary Patients Do Well in Colorado? W. A. Campbell.
 32 *Mental Symptoms of Neurasthenia. W. K. Walker.
 Cincinnati Lancet-Clinic, November 22.
 33 Compound Fractures of the Long Bones, with Special Reference to Treatment. W. U. Cole.
 34 The Ethics of the Medical Profession. Dudley S. Reynolds.
 35 A New Method for Locating Foreign Bodies by Means of the X-Rays. S. P. Kramer.
 36 Surgery of Prostate, Pancreas, and Diaphragm. (Continued.) B. Merrill Ricketts.
 St. Louis Medical Review, November 15.
 37 Causes of Appendicitis. T. C. Witherspoon.
 Northwestern Lancet (Minneapolis), November 15.
 38 The X-Ray in Therapeutics. W. P. Spring.
 39 The Minnesota State Board of Health: Its Work and History. H. M. Bracken.
 40 St. Barnabas Clinic. C. H. Hunter.
 Western Medical Review (Lincoln, Neb.), November 15.
 41 An Experience with Some Atypical Cases of Appendix Disease. W. O. Bridges.
 42 Some Cases of Appendicitis—Operative and Otherwise. A. B. Anderson.
 43 *Schleich Anesthesia. R. M. Stone.
 44 The Management of Normal Labor, with Additional Remarks Regarding the Obstetrical Forceps. J. J. Cameron.
 Journal of Medicine and Science (Portland, Me.), November.
 45 Analysis of the Stomach Contents. Joseph P. Bodge.
 46 *Septicemia and the Curette. H. Plympton.
 47 *The Relation of Obstetrics to Gynecology. Seth C. Gordon.
 University of Pennsylvania Medical Bulletin (Philadelphia), November.
 48 *Bubonic Plague: Its Nature, Mode of Spread, and Clinical Manifestations. Simon Flexner.
 49 *The Pathology of Lymphotoxic and Myelotoxic Intoxication. Simon Flexner.
 50 The Interaction of the Blood of Cold-Blooded Animals, with Reference to Hemolysis, Agglutination, and Precipitation. Hideyo Noguchi.
 51 A Study of Immunization Hemolysins, Agglutinins, Precipitins, and Coagulins in Cold-Blooded Animals. Hideyo Noguchi.
 52 *Vaccination and Serum Therapy Against the Bacillus of Dysentery—An Experimental Study. Frederick P. Gay.
 53 Leptothrix Infection in Animals. Richard M. Pearce.
 54 *Thrombi Composed of Agglutinated Red Blood Corpuscles. Simon Flexner.
 55 *The Anti-hemolytic Action of Blood Sera, Milk and Cholesterol upon Agaricin, Saponin, and Tetanolysin, Together with Observations upon the Agglutination of Hardened Red Corpuscles. Hideyo Noguchi.
 56 *Study of the Bacteriolytic Serum Complements in Disease: A Contribution to Our Knowledge of Terminal and Other Infections. Warfield T. Longcope.
 57 The Constitution of Snake Venom and Snake Sera. Simon Flexner and Hideyo Noguchi.
 Vermont Medical Monthly (Burlington), October 25.
 58 Modern Treatment of Prostatic Hypertrophy. John B. Wheeler.
 59 Some Observations on the Diagnosis of Smallpox. Charles S. Caverly.
 60 Some Remarks on Nervous Cough. Elmore Palmer.
 61 *The Methods of Using Argylol. A. C. Barnes.
 Archives of Pediatrics (N. Y.), November.
 62 *The Management of the Fat Percentage in Feeding Difficult Cases. Thompson S. Westcott.
 63 *The Proteids of Milk. Henry D. Chapin.
 64 Recurrent Vomiting in Children, with Report of Four Cases. Henry L. K. Shaw.
 65 *Bronchitis and Bronchopneumonia in children. E. W. Mitchell.
 66 Pneumonia in Children. J. P. Barber.
 67 A Case of Congenital Rachitis. Maurice Ostheimer.
 Physician and Surgeon (Detroit and Ann Arbor, Mich.), August.
 68 The Care of the Consumptive Poor, with Especial Reference to the Establishment of a Consumptive Hospital in Connection with the County Farm. Herbert M. King.
 69 Surgical Observations in India. Hal C. Wyman.
 70 Puerperal Eclampsia. Herbert E. Randall.
 71 *Septicemia and the Curette. Harry Plympton.
 72 Antitoxin in the Treatment of Diphtheria. C. C. Clancy.
 73 Some Observations on Smallpox. Franklin Bauch.
 73½ Modification of Farlow's Tonsil Punch. E. Amberg.
 Colorado Medical Journal (Denver), August.
 74 Abortions. R. C. Robe.
 75 Friedreich's Ataxia. A. I. Hayes.
 76 The Treatment of Headache. Bernard Oettinger.
 77 Myopia and Its Treatment. W. C. Bane.
 Interstate Medical Journal (St. Louis), November.
 78 *The Enlargement of the Pelvic Outlet During Labor. Julius Neumann.
 79 *Cardiac Dilatation at Puberty. Alfred Friedlander.
 80 *Some Studies of the Periodicity of Inebriety. T. D. Crothers.
 81 Climatological Features of Plague in Manila. W. J. Calvert.
 82 Penetrating Wounds of the Abdomen. H. L. Nietert.
 Medical Herald (St. Joseph, Mo.), November.
 83 *The Relationship Lues Bears to the Body Politic. S. P. Collings.
 84 Presentation of Specimen of Septic Uterus. Palmer Findley.
 85 The Use of the Microscope in Examination for Life Insurance. H. Winnett Orr.
 86 Aneurism and Thrombosis of the Basilar and Cerebral Arteries—Report of Case. J. M. Mayhew.
 87 President's Address, Medical Society of Missouri Valley. Richard C. Moore.
 Journal of the Michigan State Medical Society (Detroit), November.
 88 *Optimism and Pessimism in Medical Practice. David Inglis.
 89 The Value of Plaster Casts for Accurate Case Records and as Aids in the Teaching of the Differential Diagnosis of Abdominal Tumors. Reuben Peterson.
 90 *Sequelæ of Ophthalmia Neonatorum. Don M. Campbell.
 91 *The Treatment of Typhoid Fever. George Duffield.
 92 Aneurism of the Innominate Artery. Louis J. Hirschman.
 93 *The Administration of Normal Saline Solution. Alexander M. Campbell.
 94 Annual Address of the Retiring President of the Wayne County Medical Society. Samuel Bell.
 95 *Abdominal and Pelvic Drainage Relative to Gynecology. O. H. Clark.
 Texas Medical Journal (Austin), November.
 96 *The Drug Habit: Its Treatment. M. K. Lott.
 97 Normal Salt Solution—When to Use It: How to Use It. A. F. Heineck.
 98 Adenoids and Hypertrophied Faucial Tonsils, as Portals of Infection—A Plea to the General Practitioner for Their Early Recognition and Removal. P. M. Payne.
 Therapeutic Gazette (Detroit, Mich.), November 15.
 99 *Retention of Urine, and Its Relief—A Clinical Lecture. John H. Brinton.
 100 *Treatment of the Nervous Phenomena in Chronic Nephritis. James M. Anders.
 101 *The Action of Strychnin on the Heart, and the Evil of Over dosage. Roland G. Curtin.
 102 *Treatment of Puerperal Eclampsia. Henry E. Tuley.
 103 *The Treatment of Cases of Nasal Obstruction. Dudley S. Reynolds.
 Hot Springs Medical Journal, November.
 104 The Study of the Rectum with Reference to the Causation Factors of Obstipation. Louis J. Hirschman.
 105 *Septicemia and the Curette. H. Plympton.
 Merck's Archives (N. Y.), November.
 106 *Thiosinamine in Chronic Otitis Media, Accompanied by Impaired Hearing. Lewis S. Somers.
 107 An Index of Diseases, Alphabetically Arranged, with Their Modern Treatment. (Continued.) G. Bjorkman.
 108 *Kidney Complications in the Puerperal and Other States. O. Henley Snider.
 New England Medical Monthly (Danbury, Conn.), November.
 109 Autobiography of the Late J. Milner Fothergill, M.D., London, England. (Continued.)
 110 Observations on Anesthesia of the Drum Membrane. George B. McAuliffe.
 111 *Septicemia and the Curette. H. Plympton.
 112 Thialion. J. D. Ely.
 113 The Importance of Modern Methods in the Care and Preservation of Cow's Milk. John T. Howell.
 114 Epilepsy and Its Modern Treatment. Ambrose L. Ranney.
 Charlotte Medical Journal, November.
 115 Public Care and Treatment of Inebriety. T. D. Crothers.
 116 Some Phases of Modern Medicine. R. L. Payne.
 117 Dependent Drainage in Acute Extensive Intrapelvic and Intra-peritoneal Infection in Man by Incising the Perineum. Separating the Rectum from the Prostate and Bladder, and Puncture of the Recto-vesical Pouch of the Peritoneum. Hugh M. Taylor.
 118 *Report of Case of Septicemia, as I Felt It Myself. J. C. Newman.
 119 A Plea for Mothers and Their Offspring. T. S. Hening.
 120 Report of a Case of Secondary Hemorrhage Following Tonsillotomy, Measles. Clarence P. Jones.
 121 Some Thoughts Suggested by a Case of Urinary Fistula Following a Vaginal Hysterectomy. J. W. Henson.
 122 The Relation of Hygiene to Progressive Surgery. Granville P. Conn.
 123 The Local Use of Acetate of Aluminium. Southgate Leigh.
 123½ Remarks upon Some Indications for Wearing Glasses. John P. Davidson.
 Occidental Medical Times (San Francisco), November.
 124 *A Rare Anomaly of the Lateral Sinus. George H. Powers.
 125 *The Treatment of Carcinoma of the Uterus. D. A. Stapler.
 126 Address, San Joaquin Valley Medical Society. J. B. Rossen.

- 127 *A Clinical Review of Eight Cases of Defective Union in Fractures with Special Regard to the Prevention of Delayed and Non Union R T Stratton
- 128 Remedies to Heal the Sick R O Phillips
- 129 Surgical Treatment of Gallstones A W. Morton
- 130 Therapeutic nihilism W S Fowler
- 131 *The Use of Hyoscine Hydrobromate in Alcoholism R B Beiling
- 132 Foreign Body Retained in the Orbit for Ten Years George H Powers
- Atlanta Journal-Record of Medicine, November.
- 133 The Relation of Law to Social and Economic Conditions F S Key Smith.
- 134 Physical Culture for Children Ida R Compton
- 135 The State's Duty in Caring for Its Consumptives J L Miles
- 136 *Septicemia and the Curette H Plympton
- Texas Medical News (Austin), October
- 137 Appendicitis Robert L Greene
- 138 Smallpox J F Daves
- 139 The Use of X Rays Daniel Parker
- 140 Burns and Scalds August Kuhn.
- Nashville Journal of Medicine and Surgery, October
- 141 *Septicemia and the Curette H. Plympton

1 **Eye Strain.**—Ranney reports cases of mental failure, epilepsy, chorea, paralysis, deformity, monoplegia, diabetes, neuralgia, nervous prostration and wry neck cured by correcting eye muscle errors. He claims that each case was scientifically investigated, and while several of them justified the diagnosis of organic brain disease, complete relief by operative procedures and glasses showed the importance of eye strain in their causation. He thinks they would show to an unprejudiced mind the necessity of making careful ocular examinations in all such cases.

2 **Intestinal Diseases in Infants.**—Kerley and Hughes give the results of treatment of the out patients, which they find more amenable to drugs than has generally been held. Their methods are to discontinue milk in all cases of vomiting or diarrhea, regardless of the nature of the attack, whether mild or severe, and substitute a carbohydrate diet. They find that egg albumin water is dangerous as a milk substitute and also beef juice and other animal broths, which must be used sparingly. Every case of gastrointestinal disturbance, however slight, had the milk changed to barley water, one tablespoonful to a pint, and a little castor oil given in the intestinal cases, and calomel, 1/10 of a grain, was given every hour until six tenths of a grain had been given in cases of vomiting. The stomach was washed and if there was diarrhea, bismuth mixture given. They analyze cases and describe the methods of treatment, the root garden, milk regulation and supply, etc.

3 **Rubber Gloves.**—The use of rubber gloves is deprecated by Morris, who thinks that they interfere with the expedition of operation, abolish the sense of touch and render greater the danger of injury to the peritoneum and bacterial infection. He believes that the actual resistance of the patient can be better conveyed by the surgeon who works rapidly and with smaller incisions than is possible if he places an obstacle between the sense of touch and the object toward which that touch is directed.

6 **Ectopic Gestation.**—Starting with a detailed report of cases, Wells discusses the subject and concludes that recurrent ectopic gestation is not extremely rare, and may be expected in a large proportion of pregnancies that occur subsequent to a tubal implantation of the ovum. We are not justified in taking out the remaining and apparently normal tube at the first operation, but we should watch with unusual care the early progress of any subsequent pregnancy. Careful pathologic examination of specimens is desirable. The most frequent etio logic factor of abnormal implantation of the ovum is, he thinks, most probably a mild infection of the tube, causing change in its epithelial lining, increasing the time occupied in the passage of the fertilized ovum through the tube.

7 **Typhoid Fever.**—Nammack names the characteristic diagnostic signs of typhoid, giving in tabulated form the differential diagnosis from acute miliary tuberculosis and cerebro-spinal fever.

8 **Cortical Paralysis.**—Kahn reports a case of traumatic cortical paralysis with anesthesia of the whole paralyzed side of the trunk, which he thinks indicates that the center for

sensation of the trunk must be located in the same area as the motor function.

12. **Epilepsy.**—Park describes the surgical treatment of epilepsy rather more hopefully than some surgeons. His conclusions are given in the following:

1. Epilepsy is the last disease to which surgical measures should be indiscriminately applied. In judiciously selected cases, radical operations of various kinds suited to the individual needs of each case, have given far more satisfactory results than has non operative or medicinal treatment.

2. Every case must be studied as a problem by itself. The only general laws applying are those regarding the removal of peripheral or local foci of irritation and the destruction of paths of conduction which convey disturbing impulses. In each case we must decide as to the operative method by which we may best meet these indications.

3. In order to attain the best results patients should be seen early. It would be well to have every epileptic carefully studied by an accomplished surgeon who should review the case with a view to the possibility of surgical intervention.

4. Operation, when indicated and undertaken should be regarded as a last measure to be followed, and often preceded by others looking to a correction of all faults of diet, of elimination etc. Long continued attention to these matters is the price of eventual success.

5. In those cases in which the face, when the seizures can be controlled by the prompt use of amyl nitrite we may well consider the propriety of an excision of the cervical sympathetic.

13.—Wakefield's article will be reviewed when completed.

15 **Verbal Amnesia.**—In the case reported by Gordon the patient was able to repeat words suggested to her, but was not able to give them without help. The partial loss of memory for words interfered with correct reading and writing. It was not the idea, but the verbal image that was wanting. He thinks the lesion was probably due to softening, as shown by the conditions of the patient's arteries and aorta.

16 **Adeno Carcinoma of Male Breast.**—Two cases are reported by Hammond, both operated on successfully, the first patient dying later from apoplexy, and the latter now in perfect health. In both cases the histologic diagnosis was that of adenocarcinoma, though one might possibly have been called a sarcoma.

17 **Paraffin Prothesis.**—Allen calls attention to the possibility of a sequence of paraffin prothesis of saddle nose, paralysis of the muscular action of the wings of the nose causing impeded nasal respiration. He thinks this must be looked for whenever paraffin injections are made. He holds that this can in a great measure be prevented by firmly compressing the wings of the nose by an assistant placing a thumb in each nostril, making counter pressure on the outside with the index fingers, the pressure being maintained until the nose has been molded into its proper shape.

19 **Obsessions.**—These symptoms, which pass under the name of fixed ideas, imperative conceptions, phobias, etc., are reviewed by Diller, who describes the types and reports cases. No hard and fast rules can be given as to their treatment. It should be directed mainly against the conditions from which these arise, though in all cases it may be more or less symptomatic. In any case mental treatment must be first and be individual. The physical tone must be maintained and here the simpler rules of hygiene are to be considered as well as the use of hydrotherapy, massage and electricity. Vacations, rest, exercise, recreations, all come under this head and while the treatment by drugs is of least importance, it is well to give some simple remedy, such as tincture of nux vomica, etc., for its tonic and mental impression. As a rule, however, the simpler the drug treatment the better.

20 **The Terms Acute and Chronic.**—From a study of the subject, Smith offers the following definition.

Acute, as applied to a pathologic process, indicates of such a disease that it runs a fairly regular and limited course, such course being frequently, although not necessarily attended by severity of symptoms and the limitation being possibly in recovery.

Chronic may be applied in conditions presenting no definite duration, more or less irregularity in the presentation of symptoms, a variable severity of symptoms and ordinarily limited only by the death of the patient.

21 **Neurasthenia.**—The symptoms and treatment are described by Aikin. He advocates special attention to environment. The hospital or the trained nurse at home can make practical the systematic application of required measures, the use of the bath, graded for the individual regulated diet, ex

cluding as a general rule the salted meats and more indigestible vegetables, starches, bananas and strawberries, as well as sweets, coffee, tea and alcohol. Water should be copiously used, but not at meal time. The slow sipping of very hot water about one-half hour before each meal is often of benefit to the atonic stomach. Saline and lithia drinks assist in lessening fermentation in the alimentary canal. Hot broths and milk just at bed-time often help sleep. The patient should be encouraged but not too much indulged. If the home treatment is too lenient in this respect, a change is required. General faradization, hydrotherapy and massage are all useful. Drugs should be the last thing, but most neurologists use them. Among them, iron is of first importance. The alkalies are of great service, the glycoposphates of lime and soda are recommended. The fluid extracts of aqueous solutions (instead of tinctures, should be used to avoid the alcohol. If any gastric disturbance exists it should be treated. For hypnotics, trional and the bromids given in hot milk or broth are the most useful. Opium and its derivatives with alcohol in every form, are to be avoided. Constipation is best treated by gradually decreasing doses of salines with increased ingestion of water.

22. Sex Production.—Kolipinski has studied sex production, taking 192 families and dividing them according to types as to the first three births. The theory which he advocates is that the person of the greatest will-power will produce his own sex first; understanding by will-power, decision, determination and resolution. From his studies he finds that more males than females are born and that twins are more common among boys than girls, that older fathers produce more boys, and that wives older than their husbands produce more girls, which last he explains on his theory that the older person has the stronger will. Prostitutes give birth mostly to boys, which he also explains on the ground of their debilitated will-power. Jews have more boy children than their surrounding races. Finally, male drunkards produce boys. Whether this is on account of the chronic alcoholic poisoning of the fathers or whether it results from the cowed and miserable state of the mothers, is left unsettled.

23. Nasal Obstruction.—The importance of nasal obstruction is emphasized by Donovan, who enumerates the symptoms produced by mouth breathing, and he advises the general physician who meets many cases of hacking cough, hay fever, asthma, bronchitis, etc., to carefully examine the nose. He thinks many cases of neuralgias, conjunctivitis, keratitis, iritis, and lachrymal trouble are relieved by attention to the nasal mucous membrane. Attention must be given to the clothing and diet and each individual case considered. As regards operations, he says he favors them where required, but says the job you underdo may be corrected later, while the one you overdo can never be corrected. Unless one is absolutely sure that a portion should be removed, it is best to leave it alone.

24. Barber-Surgeons.—Taylor's address is an interesting historical summary of barber-surgeons as an institution of the past.

25. Tetanus.—Seven cases of tetanus are reported by Strong, with a discussion of the condition.

26. Miscarriage.—Some points of practical value in the diagnosis and treatment are noted by Friedman; the first is pelvic pain associated with uterine bleeding. The symptoms, however, often simulate those of bleeding extra-uterine pregnancy. He points out the differences, the tender mass at the side of the uterus and the discharge of decidua gravidatis without chorionic villi, and the disproportion between the severity of the pain and the size of the uterus, and between the blood lost and a pulse which indicates hemorrhage, also lack of the globular enlargement of pregnancy, the enlargement being longitudinal only. The question of threatened or inevitable miscarriage must remain always one of personal judgment in these cases. He suggests a plan of treatment to cover all cases: 1. Where there is a high temperature indicative of sepsis, or decided affection of the pulse rate by the bleeding, the uterus should be at once emptied. Careful attention should be directed to conservation of the ovum if neither of these conditions is present. If no part of the ovum is prolapsed, if the

patient's pulse is good in quality and less than 110 beats per minute, treatment should be expectant and the case may be seen only occasionally if in charge of a good nurse. The prognosis is generally good. If radical measures are decided on he would use the finger as a curette so as not to injure too much the uterine mucosa and possibly set up the foundation for a subsequent endometritis. If the finger can not be used, curette should be employed and in that case the uterine cavity should be thoroughly irrigated with 1/5000 sublimate solution or 1.5 to 2 per cent. formalin or sterile water, the quantity being important. He thinks that most women either through design or unwittingly, underestimate the duration of their pregnancy, and this is a matter of importance as regards the removal of the placental remains or the decidua serotina. A seven or nine weeks he has found that a small tufted piece of chorion remains attached to the uterine wall and causes persistent bleeding, consequently, in very early miscarriages, this immature placenta must be sought.

27. Axillary Carcinoma; Amputation Through Shoulder Joint.—In 1897 Roberts advocated, before the Philadelphia Academy of Surgery, disarticulation of the shoulder-joint as a routine method of treatment for all cases of secondary axillary carcinoma from mammary tumors. This is different from the suggestion to remove the heavy lymphoid arm in order to get rid of the weight. He did not operate in this manner until 1899, and he reports a case. He subsequently found that Dr. Herman Mynter published in the *Buffalo Medical Journal* an account of a case in which he disarticulated the arm as a preliminary step to the removal of the malignant mass in the axilla, secondary to breast cancer. The patient lived a year. What he emphasizes particularly is that this should be advocated as a routine measure in all cases of axillary cancer, secondary to malignant disease of the breast, and that the subclavian artery and vein should be ligated above the clavicle before the disarticulation is done. Then the arm should be cut off and the lymph nodes and other affected tissues removed. A flap from the outer aspect of the arm may be retained to cover the axilla and chest, if such integument be needed.

28. Hernia.—The statistics as to the mortality, etc., of the operative treatment of hernia are reviewed by Martin, who remarks that the operation he has himself employed is practically the Halsted operation, differing only in the fact that the internal oblique and transversalis muscles are not cut. His records show 116 cases of hernia, including inguinal, femoral and the umbilical varieties. He tabulates these, giving the details briefly in cases of death, which were exclusively confined to the strangulated cases, and reports in detail several cases of interest, including four of properitoneal or interstitial hernia, one of reduction en masse and one of bowel rupture. In all the cases which he has been able to trace there has not been a single recurrence. He used in all, excepting two cases, non-absorbable sutures of silk and silver wire. In the two cases in which absorbable sutures were used, kangaroo tendons were employed. They did well, but he has not found it necessary to continue the use of this material for sutures.

30. Exophthalmic Goiter.—The case reported by Potts was peculiar. An ankle clonus existed during the disease, disappearing as the patient improved, and there were also attacks of apparent unconsciousness, the more complete ones lasting considerable periods of time, occurring after undue exertion and followed by more active symptoms of the disease. He also notes that marked improvement ensued from the use of sodium phosphate, and correction of the disease of the nasal mucous membrane, and emphasizes the bearing of the latter on the case.

31. Tuberculosis.—Two hundred and fifty cases are discussed by Campbell, 129 males and 121 females; 60 per cent. of the males being benefited, and 50 per cent. of the females. The former included more in the first stage of the disease, in which the proportion benefited reached 92 per cent. A family history of tuberculosis seemed to have some effect on the prognosis. Only 53 per cent. of subjects with this were known to have been benefited, while the percentage was 59 benefited of those with good family history. In the 21 cases in which the disease had not existed longer than three months, 73 per cent.

were benefited. In the 84 in which it had lasted longer than three months and less than one year, 56 per cent. were benefited. Of those in the first stage of the disease, 92 per cent. were benefited, and only 1.37 per cent. have died. In the third stage only 13 per cent. were benefited and 62 per cent. died. Of the total number of cases 17 $\frac{3}{5}$ per cent. were cured, leaving no symptoms whatever of the former disease except a slight dulness in the former consolidated area, and diminution of vesicular murmur. Hemorrhage occurred in 38 per cent. of cases, 16 per cent. being cured and 32 per cent. improved. A slightly larger percentage of cases without hemorrhage were cured and improved, showing that hemorrhage slightly reduces the chance of recovery. He calls attention to the importance of those going to Colorado having sufficient means to support themselves for a while, until they are sufficiently well to take up some light employment. He also insists on the importance of sending patients in the early stages rather than waiting for the fuller development of the disease.

32. Neurasthenia.—Walker finds from a study of neurasthenic cases that occasionally psychic symptoms of organic insanity may be present, recognizing, of course, that the early symptoms of these forms of mental disease are those which we habitually regard as functional. He emphasizes in conclusion the following points: 1. Every case of neurasthenia presents mental symptoms in some form. The difference between neurasthenia and certain forms of mental disease is largely one of degree; fundamentally they are the same, a pathologic lowering of the psychic functions, having the same etiology, and so far as he has been able to ascertain, the same underlying pathology of nutritive change in nerve-cells. From this point of view the mental symptoms assume greater significance and in many cases we may anticipate a greater degree of defectiveness to follow, depending on duration and virulence of exciting causes, the peculiar nature of causal poisons and vulnerability of individual tissue, and when they are encountered in one of previously known mental weakness, instability or eccentricity, or, in one of insane ancestry, they should lead to energetic measures not only remedial and reconstructive, but tending to the ultimate regulation of the environment and conduct of the patient in order that more serious developments may be prevented.

43. Schleich Anesthesia.—The different forms of anesthetics and agents are noticed by Stone, who has used the Schleich solution in 666 operations, in 31 cases for long operations averaging 100 minutes to the operation. He gives certain anesthetic points, such as the muscular tone of the heart being the most important pre-anesthetic condition, the lymphatic habit the most dangerous. Securing the confidence of the patient is one of the most important duties of the anesthetist. The anesthetic should be given in a perfectly quiet room, never preceded by morphin, and care be taken that no artificial plate is left in the mouth. For chloroform the Esmarch mask is the best; the Stone mask is one of the best for ether and the Schleich solution. Begin slowly, never allow force used to restrain the patient, secure if possible profound surgical anesthesia before using the knife, and never observe the operation when giving the anesthetic. Watch the color of the face, lobe of the ear, also the pupil and temporal pulse. Train your ear so that it hears every breath without seeming to listen to the respiration. Add your anesthetic, whatever it may be, from the best dropper with constant uniform additions, the rapidity varying with the stage of the operation. Beware of a heart of feeble tone; use adrenalin or strychnia prior to anesthesia. In chloroform anesthesia beware of half-closed eyes. In the Schleich anesthesia only a fraction of patients with half-closed eyes give trouble. Keep the possibility of death on the table in mind. The normal pupil in good surgical anesthesia is well contracted and steady. A rapidly dilating pupil from a contracting one means imminent death. A pin-point pupil is indicative of a too profound anesthesia. Do not be alarmed by noisy respiration during rectal operations. Secure profound anesthesia before division of the sphincter ani, and, if using chloroform, remove the mask the moment the surgeon's fingers touch the anus for division. A deep inspiration of chloroform can easily kill: this precaution is not necessary with the

Schleich solution. Never forget that partial anesthesia, "just enough to keep them under," is most dangerous. Never forget that the safest anesthesia is surgical anesthesia, steadily maintained, and that the least quantity of anesthetic which will assure this is best. If you ever have trouble, keep your head and act promptly. If collapse takes place, or ashy pallor and cessation of pulse, give adrenalin and strychnia at once, lower the head, making rhythmic traction of the tongue every four seconds and artificial respiration if this fails. Death is nearly always due to unskillful administration—administration of an overdose. Remember that profound sepsis, enfeebled heart action, chronic alcoholism, asthma, serious valvular lesions, and severe albuminuria are the most dangerous states for anesthesia.

46.—See editorial in THE JOURNAL of November 22, p. 1327.

47.—See abstract in THE JOURNAL, xxxviii, p. 1668.

48. Bubonic Plague.—Flexner gives a very good general account of our knowledge in regard to bubonic plague, which he says has gained admission into our midst. He describes the different types and calls attention to the personal transmission of the disease. Our ideas of the subject have greatly developed in the last six or seven years; there is hardly any medical subject in which our acquisitions have been more rapid. He calls attention, in conclusion, to the danger of too great indifference to the conditions on the Pacific Coast at the present time.

49. Lymphotoxic and Myelotoxic Intoxication.—But few publications have appeared in regard to lymphotoxins and myelotoxins, as Flexner remarks in the beginning of this experimental study. He experimented extensively on guinea-pigs and notes the changes observed. The reaction of the bone marrow especially to the lymphotoxins and myelotoxins is remarked on; while the reaction of the lymph glands, intestinal lymphoid tissue, and spleen to bone marrow toxin is remarkable, the response of the marrow to lymphotoxins and splenotoxins is far less marked. The first, he says, can only be explained by the possession of numerous amboceptors common to the lymphoid cells and capable of stimulating such tissue to activity, while the smaller response of bone marrow to foreign cytotoxins may be dependent on its possession of a smaller number of cells with the corresponding receptors for fixation of the amboceptors of these sera. He also calls attention to another point. In spite of the striking hyperplasia of cells, the degenerations discovered were minute and comparatively trifling, and the glandular reactions are far behind those caused by microbial toxins, and he emphasizes the importance of the molecular or other invisible forms of injury which may occur.

52. The Dysentery Bacillus.—That the bacillus of Shiga is the cause of acute and other forms of dysentery in all climates and probably a number of summer diarrheas prevailing in the warm countries among infants is the first conclusion of Gay. He finds that guinea-pigs react characteristically and that if the bacillus is cultivated outside the body it quickly suffers a reduction of virulence for guinea-pigs, which, however, may be increased by successive passages through the body of these animals. This results in the establishment of a uniform grade or degree of virulence in the organism, irrespective of its source, which adapts it for the production of vaccines of quite uniform activity. The vaccines consist of suspensions of dysentery bacilli killed by the addition of trichresol, the activity of which undergoes an increase, for a time at least, that is coincident with disintegrative changes taking place in the micro-organisms. This vaccine suffices to protect guinea-pigs from a succeeding multiple fatal dose of living dysentery bacilli, and to produce in the horse an active immune serum. The immune serum of the horse exhibits marked protective properties in preventing fatal infection with the bacillus or intoxication with its vaccine in guinea-pigs. While the several bacilli used in the investigation belonged to one definite species, minor distinctions were present. The most marked differences noted were the weaker virulence of the "Kruse" stain as compared with the other strains of bacilli, and the slightly reduced activity both of vaccine and immune serum when directed against strains of organisms other than that from which they were

prepared. The bacillus of dysentery resists bacteriolysis by blood serum to a greater extent than some other members of the colon-typhoid group of bacilli. The use of serum therapy for bacillary dysentery and for certain forms of the summer diarrheas of infants is rendered highly promising.

54. Red Blood Corpuscle Thrombi.—Flexner's conclusions are given as follows:

1. Agglutination of red corpuscles *intra vitam* is not uncommon in infectious diseases in man and animals. 2. A special variety of thrombi is produced through this agglutination, which may be designated agglutinative thrombi. 3. When such thrombi are old, or when the agglutination is compact, they may present appearances to which the name of "hyaline thrombi" has been applied. 4. Other alterations of the blood than those arising in infectious diseases may bring about agglutinative thrombosis, the nature of this alteration being little understood. 5. Poisons which destroy corpuscles rapidly are provocative of agglutinative thrombosis. 6. The so-called "fibrin ferment thrombi" are probably nothing else than agglutinative thrombi.

55. Antihemolysis.—Noguchi's article, of which the title gives almost a synopsis, ends with the following conclusions:

1. Blood sera and milk exert more or less anti-hemolytic action against certain phyto-hemolysins and bacterial hemolysins, and their action is non-specific. 2. The manner of anti-hemolytic action of sera and milk agree with the manner of action of cholesterol and lecithin against these hemolytic agents. 3. It is highly probable that this anti-hemolytic action of sera and milk depend either wholly or in part on their cholesterol constituent. 4. Agaricin contains a hemolytic principle of considerable activity. 5. Hardened red corpuscles may still be agglutinated by ricin, venom-agglutinins, and serum agglutinins.

56. The Bacteriolytic Serum-Complements in Disease.—The following are Longcope's conclusions:

1. Normal individuals show slight fluctuations in the bacteriolytic complement-content of their blood. 2. In many prolonged chronic affections, such as nephritis, cirrhosis of the liver, and diabetes mellitus, there is a marked decrease in the bacteriolytic blood complement, which becomes more marked toward the end of the disease. 3. Terminal infection in chronic disease is probably the direct result of the diminished state of the bacteriolytic complement. 4. The blood serum of certain individuals suffering from chronic disease does not show a reduction in complement; these individuals appear to escape terminal infection. 5. Hyperleucocytosis is frequently associated with high complement-content of the blood serum for typhoid and colon bacilli. 6. The blood serum of some typhoid fever patients shows a diminution in the specific complements for the typhoid bacillus. 7. Human blood serum contains a multiplicity of bacteriolytic complements.

61.—This article has appeared elsewhere. See THE JOURNAL of November 1, title 60, p. 1131.

62. Fat Percentage.—Westcott emphasizes the following points:

1. In cases of chronic gastric or chronic high intestinal catarrh, in which underfeeding for a considerable time becomes necessary, the most satisfactory results may be obtained by the use of whey mixtures, in which the deficiency of proteids in ordinary modifications is supplemented by a high percentage of lactalbumin. 2. In many of these cases unusually low percentages of fat must be given, and for this purpose dilutions of milk without cream in conjunction with a fat-containing whey offers the most expeditious means of increasing caseinogen and of keeping the fat percentage within the bounds of digestive tolerance.

63. Milk Proteids.—The point made by Chapin is that the different results obtained by various authorities in regard to the proportion of proteids in milk, are due to the different methods of analysis and until we can learn the composition of the different proteid bodies and some uniform method of separating these, comparing the milk analyses made by different methods may lead to erroneous conclusions.

65. Bronchitis and Bronchopneumonia in Children.—The principal thing in children who continuously take cold is to increase the physical vigor, not to live or sleep in too warm apartments, with a simple diet, pure air day and night, systematic development of the muscular system, plenty of sleep, bathing and open air treatment as much as possible. Allow the child to go barefoot; the child that has not been allowed to go barefoot has lost one of the privileges of childhood. For the medicinal measures Mitchell mentions cod-liver oil for its general tonic effect, iron, and iodid of potash. Where there is enlargement of the lymph nodes, a course of syrup of iodid of iron is often beneficial, but all drugging which interferes with the appetite or digestion should be avoided. In the treatment of severe bronchitis, the cotton jacket, either with the oiled silk covering, or made by basting the cotton inside an ordinary undershirt, is a good plan. Counter-irritants he does not believe in. The question of alcoholic stimulants is to be decided by the individual case. Control of temperature is best done by a warm bath gradually reduced, with cold sponging of the head. The cold plunge bath is not well-borne by children.

Careful feeding is of great importance. For cases that become subacute or chronic, creosote preparations are of great value. Carbonate of guaiacol has been used by Mitchell; it does not readily derange the stomach. Strychnia is often useful as a heart stimulant.

71.—See editorial in THE JOURNAL of November 22, p. 1327.

78. Enlargement of the Pelvic Outlet During Labor.—The results of measurements in nine cases are reported by Neumann. Enlargement of the transverse diameter of the outlet during labor was observed in every case, the maximum being in one case 2.5 cm. It could be noted as soon as the fetal head entered the pelvic cavity. In 6 of the 9 cases a measured increase could be observed in the sacro-pubic diameter, being in one case fully 2 cm. He does not claim that this is the typical occurrence during the stage of expulsion, as he has been able to determine its absence in other cases. He thinks that the enlargement is probably produced by the force of the descending head, the pelvic articulations having been unusually relaxed during pregnancy. The question remains in what percentage does this enlargement occur, how great can it be, and what conditions favor the phenomenon? What effect does this increase or a complete absence of such exert on the mechanism, course and management of labor? He thinks that these questions can probably be satisfactorily answered if such measurements are made more extensively with more general use as a mode of examination of the x-rays.

79. Cardiac Dilatation in Puberty.—The cardiac dilatation that occurs from over-exertion in young children and especially at the age of puberty when they begin to use more muscle strain, particularly in the case of boys, is noted by Friedlander. The symptoms are dyspnea, weakness after even moderate exercise and often severe palpitation at such times, pallor, some times even cyanosis, capricious appetite and disturbance of sleep. These become more manifest the longer they are allowed to go uncorrected and the longer the exciting cause is allowed to exist. Physical examination shows a diffuse apex beat to the left of the mammary line, an increased area of precordial dulness, prolonged first sound at the apex or possibly a distinct systolic bruit. The question then is whether we have to deal with some grave heart disease or simple myocardial weakness, especially if there is an antecedent rheumatism or chorea, and the signs and symptoms of valvular lesion be present. Such cases are, however, exceptions. In uncomplicated cases the prognosis generally is good, the recuperative power of the heart muscle is sufficient to bring things around to the normal if the cause is removed. Exercise should be restricted and in severe cases it is best to put the patient to bed. The diet should be light and nutritious, but should have a minimal quantity of fluid. Liquid food given in small quantity is best. In the beginning if there is much irregularity of the heart's action, digitalis is often of value, and strychnia is frequently of service at all stages. The principal thing, however, is to rest the heart, not to stimulate it.

80. Inebriety.—Crothers summarizes his views that the periodicity of the drink paroxysm is evidence of central brain disease, and that heredity, nutrition, mental exhaustion, and environment are all very common causes or predisposing factors of this condition. Allied diseases, of which epilepsy is very common, are frequently interchangeable or associated. The drink periodicity follows a uniform line of events. These are the most uncertain and dangerous of all drink neurotics and are the least understood. The prognosis is uncertain and full of dangerous possibilities. Very important medicolegal problems are associated with them, and each case requires especial study.

83.—See abstract in THE JOURNAL of October 25, p. 1064.

88. Optimism and Pessimism in Medical Practice.—The principal points made by Inglis in his article are the needlessness of the too common pessimistic views in regard to certain forms of nervous diseases, such as hysteria and neurasthenia, each of which is capable of the most sudden and rapid improvement. It is important in these cases not to help the morbid condition by pessimistic suspicions or attitude on the part of the physician and the special importance of this in

medicolegal cases is noted. Even serious organic nervous troubles like locomotor ataxia often have not the bad prognosis that is too commonly given them. Many cases of locomotor ataxia he believes can be improved, not only in symptoms, but the sclerotic areas may diminish. Even in infantile paralysis the great majority of cases could be spared their deformity if the physicians were impressed with the fact that countless new cells in the spinal cord are going to develop and take up their activities.

90. Ophthalmia Neonatorum.—Campbell reports cases of entropion, perforating corneal ulcer and secondary glaucoma with buphthalmos.

91. Typhoid Fever.—Duffield believes in intestinal antiseptics and finds that guaiacol meets the needs better than any other remedy. He usually gives 5 minims every three or four hours in capsules and has often noticed a special antipyretic effect, though given for its antiseptic properties. Its local application has taken the place of baths with him for many years. He employs it over the ileocecal valve, rubbing in four or five minims gently and covering with cotton wadding. The skin seems to absorb the remedy quickly. As regards diet, he objects somewhat to the exclusive milk diet because milk is not a fluid within the body, but he allows plenty of sterile water, beef broth, beef juice, strained animal broths and certain artificial foods. As the fever abates, the broths may be thickened and a soft diet be substituted gradually.

93. Normal Saline Solution.—Campbell uses normal saline solution in many conditions, aside from emergency cases, for loss of blood. He finds it valuable in the hemorrhages of typhoid. It is an extremely valuable adjunct. Heart disease, hemophilia, atheroma, apoplexy, chronic diseases of the lungs, kidneys or liver are all contraindications.

95. Drainage.—Clark thinks drainage is still too much followed. It simply means untidy surgery and hinders the free exit of pus and infectious matter. It introduces a foreign body, leads to infection, is often difficult to remove, weakens the abdominal wall and leads to hernia, retards the healing of the wound, may be the cause of great pain and serious accidents in its removal from adhesions and may also cause fecal fistula.

96.—See THE JOURNAL, xxxviii, §144, p. 793.

99. Retention of Urine.—The retention of urine from acute inflammatory injuries and organic stricture and senile enlargement of the prostate are all noticed in detail with their treatment by Brinton.

100. Chronic Nephritis.—Anders remarks that carefully selected hygienic treatment may often retard or arrest the morbid processes in this condition, and he advises a mixed diet with some digestible vegetable and starchy foods in most cases. An absolute milk diet is recognized to cause, by the ingestion of massive quantities of fluid, increased blood pressure and overwork of the heart, an objection which is often overlooked. He does not find that the proteid foods necessarily cause uremia, though an excessively animal diet may have some such effect. As regards uremic convulsions he finds dry cups applied over the loins exceedingly effective, and better than diuretics. He speaks highly of venesection in this condition followed by normal saline solution administered intravenously. The question of the use of morphin is discussed and experience shows that it is less harmful than might be expected. In acute nephritis and in chronic nephritis it should only be applied after other remedies, including jaborandi and venesection, have failed or are contraindicated by too great feebleness of circulation. Chloroform has some advantages in uremic convulsions, it being a rapid remedy. Cerebral hemorrhage should be treated as in other conditions. When a hypnotic is needed, sulphonal, trional, and chloralose are the best drugs. For the headaches associated with renal disease, palliation is the only possibility. Restriction or regulation of diet may do some good. Phenacetin (5 or 10 grains) combined with caffeine (2 to 3 grains) in capsules, every third hour has had good effects in his hands.

101. Strychnin.—Curtin protests against the too common overdosing with strychnin.

102. Eclampsia.—The treatment of puerperal eclampsia is summed up as dietetic, hygienic and medicinal, an exclusive milk diet without any beef preparations or other foods, frequent bathing, keeping the skin active, diuretics, when necessary, and laxatives or cathartics, with high enemata if we can not give enough water by the mouth, and calomel in small doses frequently repeated. To control the convulsions the following are the chief agents: chloroform, veratrum viride, morphin and chloral. Chloroform must be given almost constantly during the convulsive stage and the stage of coma. Norwood's tincture given hypodermically is useful only in plethoric women with a full, bounding and rapid pulse. Morphin should be given cautiously because of its possible effect on the excretory function of the kidney, and if possible not given at all. Chloral can be given with or without the bromids. Forced delivery with as little damage to the mother as possible is the treatment to be relied on.

103.—See abstract in THE JOURNAL, xxxviii, p. 1390.

105.—See editorial in THE JOURNAL of November 22, p. 1327.

106. Thiosinamin.—The action of thiosinamin is, Somers says, elective for poorly organized tissue, especially cicatricial and fibrous, and he reports a dozen cases of aural disease thus treated in doses of $\frac{1}{2}$ to 1 grain, three times daily in capsules. In a few recent cases he gave three grains daily in divided doses for two weeks, then increasing to 6 grains daily, but found that it produced nausea. At first he used it to the exclusion of all other remedies, but he found later that it was better adapted for an adjunct than an exclusive treatment. It has certain contraindications and it should be avoided in case of existing old fibrous tissue which acts as a support to important structures, and also in active inflammatory processes if it aggravates them. In his cases the results seemed to be generally satisfactory.

108. Formin.—Snider recommends the use of formin and gaduol, reporting a case of kidney complication of miscarriage where they were employed. He thinks formin has a special value in the puerperal states of the kidneys.

111.—See editorial in THE JOURNAL of November 22, p. 1327.

118.—This article has appeared elsewhere. See THE JOURNAL of November 15, title 26, p. 1278.

124. Lateral Sinus.—Powers reports a case in which an abnormality existed of the lateral sinus which extended directly under McEwen's triangle and the fossa mastoidea so that there was no possible means of entering the antrum without first going through the sinus transversus.

125. Uterine Carcinoma.—The inoperable and hopeless cases of uterine carcinoma are, as Stapler points out, often greatly relieved by treatment, caustic applications, etc. For operable cases the only thing to do is to resort to surgery as soon as possible. He gives the details of Wertheim's operation, which is the ideal of a radical treatment. (See Wertheim's latest report, §48, p. 1491.)

127. Fractures.—From the cases here reported, Stratton deduces the following conclusions:

1. The management of fractures which are in locations most frequently the site of delayed or non-union, namely, the shafts of long bones, and especially those of the lower extremities, should receive treatment, adapted to prevent as far as possible failure of prompt union.
2. This should be most carefully followed in individuals of low general vitality from any cause, and especially when associated with the abuse of alcohol.
3. This preventive treatment is also demanded in cases in which the nutritive processes at the site of fracture are deficient by reason of the extreme violence of the traumatism, or former bone injury, or existing bone disease, with or without loss of bodily tone.
4. That in cases of simple fractures, at least, local and general massage, electrification, stimulating frictions, out-of-door life, change of climate, and detailed attention to the state of bodily health, are well-known means of securing a higher degree, not only of general vigor, but also local nutrition of the injured limb, which need to be more generally considered in relation to the prevention of these complications.

131. Hyoscin Hydrobromate in Alcoholism.—Bering reports a case treated according to the method recommended by Lott, with frequently repeated doses of $\frac{1}{100}$ grain of hyoscin hydrobromate, followed later with pilocarpin, the man taking altogether 43 doses of $\frac{1}{100}$ of a grain inside of three days. He was apparently entirely cured, not only of his chronic alcoholism, but of the effects of the drugging. [The remedy

seems risky thus employed considering the effect of hyoscin in some cases.—Ed.]

136.—See editorial in THE JOURNAL of November 22, p. 1327.

141.—Ibid.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal (London), November 15.

- 1 *The Treatment of Pneumonia. Dyce Duckworth.
- 2 *The Diazo-Reaction in Pulmonary Tuberculosis. Raoul De Boissiere.
- 3 *Two Cases of Hyperpyrexia with Recovery. Robert E. Lord.
- 4 *Concurrent Scarlet Fever and Measles in Children. Ernest A. Dent.
- 5 Dengue Fever in Penang. F. M. T. Skac.
- 6 Dengue Fever in Burmah. W. G. Pridmore.
- 7 The Treatment of Ague by the Hypodermic Injection of Quinin. John Smyth.

The Lancet (London), November 15.

- 8 *The Natural History and Pathology of Pneumonia. J. W. Washburn.
- 9 *Some Considerations upon the Possibilities of Future Legislation in Matters of Public Health. John P. Gordon Dill.
- 10 *The Nature, Causes and Treatment of Cardiac Pain. Alexander Morison.
- 11 *Primary Carcinoma of the Liver; Very Rapid Growth; Great Emaciation with Increase in Body Weight; Marked Pyrexia; Duration, Four Months (?); Death. T. D. Acland and Leonard S. Dudgeon.
- 12 *Exposure of the Gall Bladder and Bile Ducts. Bilton Pollard.
- 13 The Treatment of Early Cancer of the Larynx in Thyrotomy. Eugene S. Yonge.

The Practitioner (London), November.

- 14 *Views on Alcohol as a Beverage and Medicine. Samuel Wilks.
- 15 *A Personal Experience of Alcohol. Henry Thompson.
- 16 *Alcohol as a Medicine. W. H. Broadbent.
- 17 *Notes on the Pathology of Alcoholism. G. Sims Woodhead.
- 18 *Alcoholic Beverages. James Edmunds.
- 19 *Alcohol in Surgery. Pearce Gould.
- 20 *On the Treatment of Dipsomania and Chronic Alcoholism by Hypnotic Suggestion. J. Milne Bramwell.
- 21 *Alcohol from a Sociological Standpoint and the Medical Temperance Movement. J. J. Ridge.
- 22 *Mortality from Alcoholic Excess in England and Wales. Francis Vacher.

Intercolonial Medical Journal of Australasia (Melbourne), October 20.

- 23 Presidential Address, Melbourne Medical Association. Charles Page.
- 24 Examination of Victorian Railway Employees in Vision, Color Sense, and Hearing. Hugh L. Murray.
- 25 A Note on the Diagnosis and Treatment of Antral Empyema. James W. Barrett.

Australasian Medical Gazette (Sydney), October 20.

- 26 The Majority of the Medical School of the University of Sydney; Being an Account of the Rise and Progress of the School. T. P. Anderson Stuart.
- 27 Bacteriology of the Blood. H. Skipton Stacy.
- 28 On the Value of an Examination of the Blood as an Aid to Diagnosis. C. Reissmann.
- 29 Influenza. W. Camac Wilkinson.

Annales de l'Institut Pasteur (Paris), xvi, October.

- 30 Sur le sort (fate) des bacilles de la lèpre dans l'organisme des animaux. W. W. Iwanow.
- 31 Sur les sensibilisatrices des serums actifs contre les substances albuminoïdes. Gengou.
- 32 Recherches sur les anticorps des spores. W. Defalle.
- 33 Note sur les diverses pasteurelloses observées en Turquie. M. Nicolle.
- 34 Sur le chauffage électrique des étuves à température constante (electric incubators). L. Marmier.

Presse Med. (Paris), ii, October 29 to November 8.

- 35 (No. 87.) *Le globule eosinophile du sang. Recherche et morphologie. V. Audibert.
- 36 (No. 88.) *Pathogénie de la grenouillette (ranula) sublinguale commune. B. Cuneo and V. Veau.
- 37 (No. 89.) *Indications de l'opération de Bottini. E. Desnos.
- 38 *Nouvelle solution de cocaine pour la rachicocainisation. Guinard, Ravaut and Aubourg.
- 39 (No. 90.) *Les leucocytes dans les maladies infectieuses. F. Bezançon and M. Labbé.
- 40 Les travaux (works) scientifiques de la Conference Internat. de la Tuberculose. E. De Lavarenne. (Commenced in No. 89.)

Revue de Gynecologie (Paris), vi, July to October.

- 41 (No. 4.) *Procédé opératoire pour la cure des grands prolapsus génitaux. G. Bouilly and R. Loewy.
- 42 *L'éclairage de la cavité abdominale (ventroscope) comme méthode d'examen dans les cas de celiotomie vaginale. D. de Ott.
- 43 *Contribution à l'étude de la tuberculose primitive du canal cervical de l'utérus. Brouha.
- 44 *La technique de l'opération de Maydl dans la cure de l'exstrophie vesicale. E. Forgue.
- 45 *Traitement de choix de l'anus herniaire. V. Pauchet.
- 46 (No. 5.) *Indications et résultats de l'hystérectomie dans le cancer de l'utérus. S. Pozzi (Paris).

47 *Traitement chirurgical du cancer de l'utérus. T. Jounesco (Bucharest).

48 *Ibid. E. Wertheim (Vienna).

49 *Ibid. T. S. Cullen (Baltimore).

50 *Ibid. W. A. Freund (Berlin).

51 L'hystérectomie dans le traitement de l'infection puerpérale. Ibid.

52 Ibid. T. Tuffier (Paris).

53 *Ibid. H. Treub (Amsterdam).

54 *Ibid. Leopold (Dresden).

55 Discussion on above addresses at IV Internat. Congress of Gynecology, Rome, September 15-21.

Centralblatt f. Chirurgie (Leipsic), to November 15.

- 56 (No. 43.) *Hartes traumatisches Edem des Hand- und Fuss Rückens. Vulliet.
- 57 (No. 44.) *Ein Beitrag zur Therapie des Mastdarmvorfalls (rectal prolapse) bei Infantilisimus. K. Sonnenschein.
- 58 (No. 45.) *New Method of Spinal Cocainization. Koslowski. —Ueber ein neues Verfahren bei der Lumbalanästhesie.
- 59 Technic of Oxygen-Chloroform Narcosis. H. Wohlgenuth. —Zur Sauerstoff-Chloroform-Narkose.
- 60 (No. 46.) *Die Radikal-Operation des kindlichen angeborenen Leistenbruches (congenital inguinal hernia in children). P. Krenn.
- 61 Apparat for Oxygen-Chloroform Narcosis. Roth. —Zur Sauerstoff-Chloroform-Narkose.

Centralblatt f. Gynaekologie (Leipsic), to November 15.

- 62 (No. 43.) *Neuer Apparat für Hypodermoclyse und endovenöse Injectionen. L. A. Oliva (Genoa).
- 63 Report of Section of Gynecology and Obstetrics at Naturforschers Congress.
- 64 (No. 44.) *Growth of Placenta. F. Hitschmann and O. T. Lindenthal. —Ueber das Wachstum der Placenta.
- 65 (No. 45.) Mortification and Spontan-Elimination eines grossen Myoms. G. Schmauch (Chicago).
- 66 (No. 46.) *Complication der Schwangerschaft (pregnancy) und Geburt mit Mastdarmkrebs (rectal cancer). Rossa.
- 67 Report of Internat. Congress of Gynecology at Rome, September 15 to 21. (Commenced in No. 41.)

Therapie der Gegenwart (Berlin), October.

- 68 *Ueber physiologische Albuminurie. W. von Leube.
- 69 *Ueber Osmo-Diätetik. H. Strauss.
- 70 Ueber einige neuere electro-therapeutische Methoden. A. Eulenburger.
- 71 *Review of 720 Gallstone Laparotomies. H. Kehr. —Ein Rückblick auf 720 Gallensteinlaparotomien, mit 90 Hepaticus Drainagen.
- 72 *Vibration Massage in Expulsion of Kidney Stones. G. Klemperer. —Vib.-Massage zur Durchtreibung von Nierensteinen. Zeitschrift f. klin. Med. (Berlin), xlv, 1-4.
- 73 (Festschrift for T. Dunin of Warsaw.) Untersuchungen über das Contagium der Variola. W. Dombrowski.
- 74 Behandlung der Aorten-Aneurysmen mit subcutanen Gelatine-Injectionen. M. Halpern.
- 75 6 Fälle von Geschwulste und Abscesse des Gehirns (brain tumors). S. Kopzynski.
- 76 Ueber die diagnostische und prognostische Bedeutung des Blutbrechens (vomiting of blood). W. Janowski.
- 77 *3 Fälle von Neuritis arsenicalis. Ibid.
- 78 2 Cases of Inflammation of Spine. J. Markewicz. —Beitrag zur chron. ankylosirenden Entzündung der Wirbelsäule.
- 79 *Hemorrhage from Erosion in Stomach. S. Mintz. —Ueber Hem. e Magenerosionen.
- 80 Die chemischen und morphologischen Eigenschaften der Hydrops chylosus et chyloformis. D. Mutermilch.
- 81 *Periodische Neurasthenie. A. Pulawski.
- 82 Determination of Nutritional Value of Food in a Sanatorium. Ibid. —Versuch der Nährwerthbestimmung in einer Heilanstalt.
- 83 Zur path. Anatomie und Klinik des primären Magen-Sarcoms. J. Pschokonski.
- 84 Metabolism in Chronic Nephritis. C. v. Rzalkowski. —Zur Lehre des Stoffwechsels bei chron. Nierenentzündung.
- 85 Ueber die operative Behandlung des Hydrops Anasarca. S. Trzebinski.
- 86 *Methylene Blue Test of Kidney Functions. A. Landau. —Untersuchungen über die Leistungsfähigkeit der Nieren mit Hilfe des Meth. Blau.
- 87 Experimentelle Untersuchungen über das Verhalten des Eisens. (iron) im Organismus der Thiere und Menschen. H. Landau.
- 88 *Ueber den Einfluss (influence) des Alcohols auf die Blut-Circulation. J. Swientochowski.

Sei-I-Kwai (Tokio), xxi, 4 to 8.

- 89 (Nos. 4 and 5.) *Cultivation of the Virus of Variola. T. Ishigami.
- 90 (No. 6.) *Peculiar Neurosis of the Aboriginal Japanese. Y. Sakaki.
- 91 (No. 7.) *Tuberculosis of the Pharynx. E. Kanasugi.
- 92 *Effect of the New Modes of Prophylaxis of Malaria Adopted in Formosa. M. Koike.
- 93 *Stored Rice and Beri-Beri.
- Tidsskrift f. d. Norske Laegerfor. (Christiania), xxii.
- 94 (No. 16.) Venereal Diseases in Christiania in 1901. Y. Ustvedt. —De ven. sygdomme i Kristiania i 1901.
- 95 (No. 17.) *Reposition af luxatio humeri a la Riedel. A. Maarud.
- 96 (Nos. 18 and 19.) *Medicin-Dispensirung paa landsbygdene. U. Bugge.
- 97 Instruction in Medicine in Sweden. H. P. T. Orum. —Den med. undervisning i Sverige.
- 98 (No. 20.) Smallpox Epidemic at Svelvik. M. Geirsvold. —Kopperne i Svelvik.
- 99 (No. 21.) *Practical Mode of Reducing Luxatio ant. humeri. O. Borchgrevink. —Praktiske repositionsmaader ved. Lux. ant. hum.
- 100 Om prostatisme. A. Hanson.

1. **Pneumonia.**—Duckworth's treatment of pneumonia consists of fever diet, mainly milk and beef tea, the reduction of excessive temperatures, both by sponging with ice water and local applications of ice, by Leiter's tubes or a similar arrangement. The plunge bath, he says, is not well borne and is exhausting, nor does he advise coal tar antipyretics. He advises 5 grs. of quinin every two or three hours until the temperature falls, and recommends a simple fever mixture of potassium citrate and ammonium acetate. Quinin is perhaps the most valuable drug, in 2 or 3 grain doses every three hours. After a day or two one may add a little compound tincture of bark to the fever mixture, one-half to one dram to each dose. The lungs should be carefully examined without exhausting the patient. After four or five days the fever usually breaks. If it does not, look out for complications; there may be an empyema which usually begins with pneumonia. There is a possible abortive type, the patient is ill and there may be herpes or some symptoms of lung disease, but the crisis may come on the second or fourth day and all the symptoms pass off. The occurrence of herpes is on the whole a rather favorable symptom, though he does not say why. Pneumonia in the drunkard is most certainly a deadly disease and double pneumonia is absolutely fatal. Influenzal pneumonia is severe, especially in elderly people. Opium may be beneficial in some cases, but it should be used with care and only where there is no reason to suspect kidney involvement. Heart failure is a severe complication to be looked for after middle life. Oxygen is advised and hypodermatics of stychnia. Duckworth speaks highly of the use of musk; he generally combines it with Hoffman's anodyne, and gives it at short intervals. A mercurial purge may be given in the beginning of the case, and the bowels will probably not require attention later. In winter time successions of hot poultices may be applied to the affected side and in hot weather be replaced by cotton wool sprinkled with spirits of camphor. The study of the temperature chart, and especially of the conditions of the heart are advised.

2. **Diazo-Reaction in Tuberculosis.**—De Boissiere reports observations and finds that the diazo-reaction occurs in a comparatively small number of cases (18 out of 130 cases examined). When present it is usually in cases of definite pyrexia and is associated with an advanced stage of the disease. In many advanced cases, however, it is absent. His findings disagree with those of Bolli in regard to its frequency, but he thinks that it has a certain prognostic value. Its presence is to be regarded as of grave significance if persistent and its disappearance considered a happy omen.

3. **Hyperpyrexia.**—The two cases reported are one of probable influenza in which the temperature ran up to 111.5 with recovery, slow but good, and the second was a case of liver abscess where the temperature rose to 110. In both cases the thermometers were compared and tested.

4. **Concurrent Scarlet Fever and Measles.**—Dent reports a case where these two diseases occurred in two persons of the same family and he suggests the possibility of the so-called "fourth disease" being an analogous mixture of German measles and mild scarlet fever.

8. **Pneumonia.**—This first Croonian lecture deals with the bacteriology.

9. **Public Health.**—Several points specially noted by Dill in his presidential address, are the danger to the public from syphilis, which he thinks is neglected in public medicine, the victims of it being perfectly free to extend the disease without any legal restrictions whatever; alcohol; the increase of insanity and its inheritance. He thinks the time is ripe for a considerable enlargement of the list of notifiable diseases, including syphilis, drunkenness and insanity. It would probably be advisable to compel those intending to marry to provide themselves with a certificate of health made on a special form like those of life insurance companies and with particular reference to hereditary disorders.

10. **Cardiac Pain.**—In this third lecture, Morison draws from the total of his studies the conclusion that the exclusive arterial views of the malady must be abandoned. The rôle of the blood vessel as a hemaduct has been exaggerated; it is more than a simple duct, it is a muscular organ, innervated,

irrigated, mobile and capable of being disabled like the heart in its muscle, its blood supply and its nerves. Angina pectoris, contrary to Huchard's views, is probably not a single disease, excepting in its symptom of cardiac pain, but is essentially three-fold, muscular, neurotic and hemic. As regards etiology he holds that it is not the rise of blood pressure as such which causes angina, but blood pressure in many cases, whether propulsive or obstructive, exercising its influence on local anatomic lesions or strained physiologic structures in the heart or in its immediate neighborhood.

11. **Liver Carcinoma.**—Acland and Dudgeon report a case and discuss the literature. They find that practically little is known with certainty as to the origin of primary carcinoma of the liver.

12. **Gall Bladder Exposure.**—Five cases are briefly summarized and Pollard is much impressed by the advantages of the Mayo Robson incision, namely, a longitudinal incision in or about the linea semilunaris and an oblique incision passing downwards from the middle of the rectus at the costal margin. This combined oblique and longitudinal incision can be employed without dividing the fibers of the rectus muscle. It can be split over the lower costal cartilage and the inner half be retracted inward without division, sufficiently to allow of the transversalis muscle and the peritoneum beneath being divided right up to the interval between the costal margin and the ensiform cartilage and the liver pushed forward by the sandbag; prolapses through the wound and its lower portion can be everted through the costal margin so as to display the biliary passages most completely and the ducts pushed and pulled forward, occupy such a superficial position that he, like Mayo Robson, has found it quite easy to stitch up the wounds of either the common duct or cystic duct with a small curved intestinal needle, held between the thumb and forefinger. The help afforded by the sandbag behind the hepatic region is very real, as is shown by the altered position of the parts when the sandbag is removed.

14. **Alcohol.**—Wilks considers alcohol a beverage and a medicine. He thinks some medical men are too indiscriminate in its use and he has had to diagnose drunkenness as the cause of the symptoms seen in cases where he was called in consultation. As a remedy in nervous disease, alcohol is invaluable and it has a place as an anodyne, but the greatest care must be used in its administration, especially in cases of low spirits and general mental despondency. The term "sedative" denotes its action in fever, since a stimulant ought to aggravate the condition. The question of diet is entirely outside the domain of the medical man. People will take liquor because they like it and the question is one of appetite.

15.—See editorial.

16. **Alcohol.**—Broadbent finds alcohol useful as a stimulant, that is as an indirect one. It should never be given in the early stages of febrile disease even when the patient is in the habit of taking it. Later the indication for its employment is not muscular prostration and weakness of which the patient may complain. We should be guided by the pulse, its frequency and low tension with dirotism and anacrotism, rather than by its apparent strength; the dry state of the tongue, and sordes about the lips, teeth and palate are indications for alcohol. To promote sleep alcohol is valuable. Its odor on the breath should be noted, and, if marked, should be an indication for the discontinuance.

17.—See editorial.

18.—See editorial.

19. **Alcohol in Surgery.**—Gould first notices the importance of alcohol in furnishing subjects for surgery and then as a complication in surgical cases and its uselessness and danger in septic conditions. He does not think it an aid in the repair of wounds and the convalescence from severe injuries, nor does he think alcohol of primary value in the treatment of shock or collapse. It is of use only in helping to tide over an emergency. It may be of some use in cases of advanced cancer as a sedative or to help appetite, but anything like the free use of alcohol is to be deprecated.

20. **Hypnotism in Alcoholism.**—Bramwell reports cases thus treated and insists on the importance of beginning treat-

ment at the commencement of a period of quiescence and securing the patient's co-operation. Patience on the part of the operator and persistence in suggestion of the distaste of alcohol are emphasized.

21. Sociologic View of Alcoholism.—Ridge gives a tabulated statement of the expenditure for drink during the nineteenth century, showing that it has more than quadrupled; that the cost per head has risen from £2 4s. 2½d. (about \$10.70) in 1801 to £3 18s. 8d. (about \$19.07) in 1900. These figures, he holds, are less than the amount actually paid, as the spirits reckoned above are broken down by the dealer and sold diluted, thus realizing more money. While there has been an aggregate improvement in the drink habit of the people in certain ways it shows a serious aspect of the case, for this increased amount is used by a smaller proportion, therefore we have more excessive drinkers. The author notes the changed standpoint of medical men in regard to alcohol within the last few years.

22. Mortality from Alcohol.—Vacher's report is entirely statistical, giving the data for the last twenty years, 1881 to 1900. The figures are in some respects rather curious. They show the large proportion of deaths from alcohol occur at an age when men should be at their best and the registrar-general's figures make a rather remarkable contrast between the extremes of mortality in the different parts of Great Britain. From this showing Cornwall seems to be the most temperate section, while Lancashire heads the list of alcoholic mortality.

35. Differentiation of Eosinophiles.—Audibert reviews the different points in the differentiation of eosinophiles and the possibilities of error in technic.

36. Pathogenesis of Sublingual Cysts.—Cunco and Veau claim that they were the first to suggest and establish that the sublingual dermoid and mucoid cysts or ranula, called "little frog" also in French and "frog tumor" in German, are the first links in a series of neoplasms that originate in the embryonal clefts. The series, starting with the ranula, includes the moderately malignant mixed parabuccal tumors and terminates in the branchial epitheliomata of the neck which are essentially malignant. The ranula develops from epithelial debris left in the depths of the cleft as the external groove closes. The relations between it and surrounding parts, its evolution and its histology all sustain this view.

37. Indications for Bottini Operation.—Desnos thinks that the indications for this operation are along the same lines as for internal urethrotomy. Both aim to remove the obstacles that have developed at the orifice or in the lumen of the passage. On the other hand, perineal prostatectomy bears more analogy to urethrectomy, as its aim is to free the periphery of the passage by removing the masses of pathologic tissue which surround and compress it. The indications for the Bottini operation are therefore slight hypertrophy of the prostate, with the middle lobe protruding into the bladder, or with bars interfering with miction and entailing more or less retention. It is less successful in hypertrophy of the lateral lobes, and is not at all applicable for hypertrophy encircling the outlet of the bladder and the urethra. In these cases of peripheral rather than orificial hypertrophy the result of the Bottini operation is insignificant and far from durable, while total prostatectomy is specially indicated. Infection of the urinary passages is not a contra-indication to the Bottini unless long established, in which case an intervention allowing good drainage, such as perineal prostatectomy, is preferable.

38. Improved Technic for Spinal Cocainization.—Nearly all the drawbacks of spinal cocainization can be obviated by using a solution of cocain 2 gm., sodium chlorid .15 gm. in 50 gm. water, as follows: Each quarter of a cubic centimeter contains 1 cg. of cocain. The solution is kept in sealed bulbs containing 1 c.c. The contents of the bulb are aspirated into a syringe with a capacity of 3 c.c. The fluid is then all expelled except the half centimeter that is to be injected. The lumbar puncture is then made and about ten drops of the cerebrospinal fluid are allowed to escape. The syringe is then adjusted to the needle and the cerebrospinal fluid is aspirated into the syringe, where it mixes with the solution of cocain already in the syringe. The whole is then slowly reinjected.

No noticeable headache, nausea or hyperthermia were observed with this technic in an experience with 70 subjects. Almost all asked for food at once. A few vomited a little, fifteen minutes after the operation, and 2 had headache that commenced twelve and twenty-four hours afterward, but soon subsided.

39. Leucocytosis in Infectious Diseases.—Bezangon and Labbé proclaim that the leucocyte formula in disease is the composite image of the local reactions to the microbes at the primary morbid focus, plus the image of the secondary reactions which occur in the blood-forming organs at a distance. Polynuclear leucocytosis is the reaction manifested by the organism whenever an infection by its acute onset necessitates an early and rapid effort to combat it. This reaction is sufficient in superficial infections caused by germs of moderate resisting power, but it proves inadequate to free the organism of germs which are difficult to destroy. Mononuclear leucocytosis, on the other hand, is a reaction that takes place more slowly, but is more durable in its action and is the only one capable of triumphing over a profound and tenacious infection. Hence it follows that infections causing a polynuclear leucocytosis, which represents merely a slight superficial reactional effort on the part of the organism, are followed by only transient immunity, while the mononuclear infections, which necessitate a prolonged effort on the part of the organism, generally confer a solid and durable immunity. Hyperleucocytosis with polynucleosis is chiefly encountered in the saprophytic affections, in localized inflammations, in suppurations, erysipelas, pneumonia, etc., in diphtheria, gonorrhea and scarlet fever, and is accompanied by hyperfibrinosis. Hyperleucocytosis with mononucleosis is the appanage of specific diseases, such as mumps, whooping cough, syphilis and tuberculosis at certain stages. It is also encountered, with abnormal leucocytes, in variola, varicella, etc. Typhoid conditions, typhoid fever, typhus and malaria, induce leucopenia with relative mononucleosis. The curve of the leucocytosis generally parallels the course of the disease. Return to normal is preceded by certain special modifications in the leucocyte formula, such as mononucleosis, appearance of transitional forms and reappearance of the eosinophiles which disappear during the height of the malady. The various infectious diseases do not have any specific leucocyte formula. The blood formula is merely a symptom, but it is constant and varies little during the course of the disease. Any disturbance in this average pathologic leucocyte formula denotes a serious, abnormal, complicated course, and is thus valuable for the prognosis. Leucopenia is a grave sign. It indicates an insufficiency in the reacting power of the blood-forming organs. Excessive hyperleucocytosis and polynucleosis indicate a violent and stubborn infection necessitating violent reactional effort on the part of the organism.

41. Operation for Large Genital Prolapses.—Bouilly's method consists in a high amputation of the hypertrophied and sagging cervix, excision of the superfluous vaginal wall and anterior colporrhaphy and colpoperineorrhaphy. It is a complete and permanent cure of all such cases. The technic is readily comprehended from the eight large cuts.

42. Ventroscopy Through the Vagina.—De Ott's communication was reviewed in THE JOURNAL of August 23, and three of the illustrations reproduced.

43. Primary Tuberculosis of the Cervix.—There are only 3 cases of primary tuberculosis of the cervix on record, and 2 were autopsy discoveries. Brouha has observed a fourth case. The symptoms were masked by those of a pronounced hemorrhagic interstitial endometritis. The uterus and adnexa were removed by abdominal section as it was impossible to determine the extent of the tubercular lesion in the cervix. The patient has been in fine health since. The cervix was found the seat of an actual tuberculous cavity, funnel shaped, and confined exclusively to the neck. The patient was clinically free from any other tuberculous manifestation then and since. He regards it as a case of ascending tubercular infection, primarily localized in the cervix. The patient's husband had died from pulmonary tuberculosis six years before, and the depth and chronic character of the lesion suggested that the infection dated from several years previously.

44 **Technic of Maydl's Operation for Exstrophy of the Bladder.**—Ten large cuts give a good picture of the various steps of the intervention.

45 **Treatment of a Hernial Anus.**—Pauchet plugs the anus with a tampon and then incises round it to mobilize a collar of skin surrounding the anus. This circle of skin is drawn up over the anus and pinched firmly with forceps like a cover over it. The entire loop of the intestine is then drawn out and the two parts are united by lateral anastomosis after the portion containing the anus has been cut off and the stumps thermocauterized and closed with a purse-string suture. The patient ingests nothing by the mouth for forty-eight hours, after which he commences on fluid foods, but no milk is given for a week. He describes 4 cases and illustrates the technic.

46 **Hysterectomy for Uterine Cancer.**—Pozzi's address was reviewed in *THE JOURNAL* of November 1, p. 1146.

47 **Surgical Treatment of Uterine Cancer.**—Jonnesco's article is illustrated with 52 large cuts. He advocates ablation of the uterus and adnexa in case of cancer, removing also the cellulofatty tissue of the pelvis, iliac fossae and lower lumbar regions with all the lymphatic vessels and ganglia contained in it. The field of operation is drained through the vagina, the long wicks replaced by a short one in twenty-four hours. He proclaims that this thorough evacuation is a rational, possible, benign, easy and effective operation for removal of malignant disease, when the lesion is circumscribed, and it is possible to remove everything and leave none of the cellular tissue and lymph ganglia. The free margin of the pelvic colon is sutured to the iliac and vesical peritoneum to shut off the abdominal cavity. He does not undertake this operation unless the patients are still in comparatively good health. He has operated by this method eighteen times during the last two years. In 10 cases the cancer was circumscribed and the patients recovered rapidly. In 8 the parametrium was already involved, and 3 of the patients have since died. There has been no recurrence in any case.

48 **IBID.**—Wertheim states that he has examined under the microscope 7000 sections in series of the parametrium and ganglia taken from 80 cases of cancer of the uterus on which he had operated. He found that the malignant disease had already invaded the parametrium in 45, and on both sides in 26. The parts involved were not in direct connection with the uterus. In 55 the cancerous degeneration had reached the outer part of the parametrium. In 11 the foci were entirely independent of the primary neoplasm. The ganglia accompanying the large vessels were found cancerous in 23 cases, on both sides in 4 and in 27 on one side. The involved ganglia were generally isolated, and very seldom was a whole group affected. In 22 cases in which the parametrium had been invaded by the cancer the ganglia were apparently intact, while in 4 in which the latter were affected the parametrium was exempt. In 32 instances both were apparently sound. In short, in 48 out of the 80 cases ablation of the uterus alone would not have removed all the cancerous tissue. He removes the parametrium as close to the walls of the pelvis as possible, drawing the ureters aside. He also resects all the ganglia that show the least trace of enlargement. In 120 operations for uterine cancer his mortality was 12 in the first 30, 5 in the second, 3 in the third and 4 in the fourth. This is a total mortality of 20 per cent, or including only the last three groups, of 13 per cent. He is careful to refrain from isolating the ureters from their nourishing vessels, and he also prepares for the hysterectomy by thorough curettement and cauterization of the cancer, packing the cavity with cotton impregnated with bichlorid. He avoids a tendency to pressure of the bladder later, by fastening its wall, after divesting it from its peritoneum, to the anterior wall of the vagina. This reduces the size of the bladder, and some of his patients have been able to urinate spontaneously from the first day. By operating along these lines he has been encouraged to extend the scope of surgical intervention. At first he operated on only 29 per cent of all that applied, but in his last two series he has operated on 50 and 52.9 per cent, notwithstanding numerous and serious complications in a number. There has been no recurrence

in 77 per cent of the 13 operated on more than two and one-half years ago.

49 and 50 **IBID.**—Cullen remarks that with Wertheim's method he does not believe that there is much further progress to be made in the line of operative treatment of cancer of the uterus. He does not approve, however, of the practice of preliminary curettement and cauterization of the lesion as it depresses the vitality of the patient. He prefers Sampson's method of severing the uterus above the infiltration and inserting it in the bladder. He also considers it important to prevent hemorrhage from the vaginal walls by encircling the vagina with deep interrupted catgut sutures before opening the abdomen. This little measure does not require more than five or six minutes, but it prevents the least loss of blood from this threatening source. Freund referred to two of his patients who were free from recurrence now twenty-four years after abdominal removal of a cancerous uterus.

53 **Hysterectomy for Puerperal Infection.**—Fieub had 690 patients with puerperal infection who have recovered and 34 who died. In 6 of the latter number there were no clinical signs of any infection outside of the uterus, but the autopsy disclosed acute septic nephritis, purulent thrombosis or some other serious lesion in all but 2. Consequently out of the total number there were only 2 that might have been saved by a timely hysterectomy. He has collected 36 cases of ablation of the uterus as a means of treating puerperal infection with no extra uterine localization or uterine complication such as retention of placenta, fibromata, etc. Fifteen out of the 36 recovered and they might have recovered without the hysterectomy as he corroborates by certain cases in his experience which came to a spontaneously favorable termination, although apparently doomed. Bacterial examination of the blood is no criterion. Freund has known cases of prohemia following criminal abortion which recovered spontaneously, and consequently does not endorse Freund's opinion on this subject. Nor does he agree with Cantledge in his assertion that "non-operative treatment of puerperal infection, if it is going to be successful will arrest it in three days." Puerperal infection does not go by the clock, he remarks. He also refutes Vineberg's assertion that a pulse of 130 indicates a fatal prognosis, as numbers of his patients who afterwards spontaneously recovered had a higher pulse than this. In short, there are no absolute indications at present for hysterectomy in puerperal infection. In a few exceptional cases it may succeed after obstetrical treatment has completely failed.

54 **IBID.**—Leopold thinks that antistieptococcus serum or some similar serum may yet prove effective in these cases. He urges careful search for all the foci of suppuration, and is inclined to believe that the extirpation of veins affected with suppuration will yet lead to brilliant successes in some of the severest cases of puerperal infection.

56 **Traumatic Edema.**—Vulliet has observed a number of cases of these lesions of the back of the hand and foot, which are so painful that they prevent the use of the hand and do not subside for eight to twelve weeks in some cases. There is no inflammation, but a fibrous, diffuse exudate between the loose skin and the hard background of the back of the hand or foot, consecutive to trauma. Warm baths are beneficial, but massage has proved injurious. Compressing bandages did not hasten the resolution of the tumor in his experience.

57 **Rectal Prolapse in Infantilism.**—The rectum was given a new support by the operation in the case described. The walls of the Douglas pouch were sutured together and the sigmoid flexure was pulled to the right. The mesocolon between the two ends of the loop was sutured together, while the intestine was sutured to the periosteum and peritoneum of the sacrum and right pelvic wall on one side, and to the broad ligament and rear peritoneum of the uterus and left pelvic wall on the other side of the loop formed by the intestine. The sagging vaginal wall was taken up by Freund's method of perineal plastics, and later, a wire ring according to Thiersch's method was introduced which healed in place without reaction. The prolapse was thus completely conquered and the conditions have remained normal during the year since.

58. Spinal Cocainization Without After-Effects.—Kozlowski reports that in an experience of 32 cases he has avoided all after-effects of spinal cocainization by his technic. A single needle prick, he says, enabled him to perform all operations on the legs and pelvis absolutely free from pain, and with no inconveniences afterward. He uses tropacocain, and puts 5 cg. of the powder in a warm, sterile, graduated dish. He then makes the lumbar puncture and allows the cerebrospinal fluid as it issues to drop on the tropacocain. The latter dissolves readily in the fluid, aided perhaps by slightly shaking the dish. When 5 gm. of the cerebrospinal fluid are thus caught in the dish, the result is a 1 per cent. solution of tropacocain which he then aspirates into the syringe and injects at once. He does not sterilize the tropacocain (Merck's).

60. Radical Treatment of Congenital Inguinal Hernia in Children.—Kremm turns the hernial sac wrong side out after reducing the hernia, and sutures the two serous surfaces together, with the cremaster and transverse fascia. This forms a solid cylinder, and he then proceeds as in the ordinary Bassini operation.

62. Apparatus for Hypodermoclysis.—The little apparatus which Oliva has found extremely useful in private practice consists of a receptacle for the fluid to be injected, with a long tube terminating in the needle. This tube is enclosed in a larger tube which terminates just below the needle in a right angled branch with faucet. The needle and tube are sterilized before using, and the water in which they are boiled is poured into a fountain syringe, the tube from which runs into the outer tube near the top. It flows through the outer tube and the terminal branch into a receptacle on the floor, or the faucet can be turned to retain the hot water in the outer tube. This warms the fluid to be injected in the inner tube, and keeps it at an even temperature. The needle is enclosed in an adjustable outer shell with a blunt tip which prevents the needle from entering too far or changing its position when once introduced into the vein.

64. Development of the Placenta.—Hitschmann's research seems to establish that when the ovum settles on the mucosa of the uterus it penetrates into it and becomes surrounded by a peculiar layer of trophoblasts or ectoblasts which possess the power of invading the veins without interfering with the circulation in them. Coagulation of the blood does not occur, and the blood circulates freely through the spaces between the villi. The process seems to be identical with that of the invasion of malignant chorion-epithelioma. In the latter case this non-interference with the blood current explains the sweeping away of fragments. As the trophoblasts surrounding the ovum penetrate into the vessels, the villi keep pace with them. The career of the trophoblasts is brief, and when it is ended the circulation through the villi is established and continues, but the penetration of the villi into the decidua and the opening up of the vessels cease as soon as the trophoblasts die. The placenta and the ovum grow, but their relation to the maternal tissues remains unaltered after the trophoblast stage is past. The etiology of placenta previa is readily explained by this assumption, as he shows by numerous cuts.

66. Pregnancy with Rectal Cancer.—Rossa's is the only case of this kind that has been published, he states, in which the pregnancy terminated spontaneously at term with the delivery of a healthy child. The patient had noticed for two months severe pains localized in the sacrum and buttocks, and difficulty in defecation, but had assumed that they were connected with the pregnancy, and kept the pains under control with morphin. The latter finally lost its efficacy, and she then for the first time allowed an investigation. A carcinomatous stricture was discovered. Fecal masses had collected above it in large amounts; after their evacuation labor proceeded normally with delivery in five hours. She refused an operation for two months longer, by which time the neoplasm had increased considerably in size, but was still circumscribed and was extirpated. All physicians should suspect cancer in case of pains localized in the sacrum and buttocks with difficulty in defecation, and insist on an examination in pregnant women the same as in the non-pregnant. Durable cures can be anticipated when

the pregnancy is interrupted at once in such cases and the neoplasm extirpated in its early stages.

68. Physiologic Albuminuria.—Leube's article was one of the addresses at the Naturforscher Congress. He proclaims that physiologic albuminuria is merely due to the greater or less porosity of the renal filter in healthy persons. In very rare cases this filter is so porous that it allows the passage of albumin in normal conditions and in the absence of predisposing factors. In other persons this filter is so dense that the albumin never filters through under any circumstances. The third category comprises persons with a moderately porous filter which does not allow the passage of albumin at ordinary times, but under the stress of unusual exertion, emotions, long standing, etc., the congenital porosity of the vascular membrane allows the passage of albumin into the urine. He thinks that this group is much larger than usually recognized. The albuminuria in these conditions is not pathologic and there can be no question of treating it. The subjects are healthy and can lead normal lives. In differentiating it we must exclude cases of subsiding or incipient nephritis, or an insidious interstitial inflammation of the kidney, and also the albuminuria of adolescents. The cause of the latter is principally that the regeneration of the blood and the heart action are unable to keep pace with the rapid growth of the body, and any extra exertion taxing the heart entails intermittent albuminuria. He thinks the term "cyclic albuminuria" should be discarded. This albuminuria of adolescents is not a physiologic albuminuria but an affection that requires treatment. Avoidance of over-exertion, repose, sleep and general hygiene, abundance of wholesome food and avoidance of stimulants and of all substances that might irritate the kidneys, are usually sufficient. There is always a suspicion that the kidneys of such persons may be more predisposed to nephritis than others.

69. Osmotic Dieting.—Strauss has been studying whether it may not be possible to influence the osmotic processes in the body by the diet. The results suggest that the polyuria in certain cases of nephritis may be a necessary compensating process. The subjects require a larger amount of water as the vehicle for the normal amount of solid elements. The quantity of water ingested should not be restricted, but the heart should be spared so far as possible all other demands. Retention of salt leads to retention of fluid in some cases of nephritis. The nephritic kidney responds less rapidly and with less intensity in osmotic variations to changes in the diet than a sound kidney. Strauss' research opens up new problems without solving any.

71. Review of 720 Gallstone Laparotomies.—The surgical aspect of Kehr's article was reviewed in THE JOURNAL of November 29. In regard to internal treatment he adopts the general opinion that the aim should not be to expel the stones but merely to keep them quiet in the gall bladder and reduce inflammation. This can best be accomplished by a few weeks of hot applications, preferably the thermophore, rest in bed and a course of Carlsbad waters. He does not operate in cases with mild attacks and no sensitiveness of the gall bladder region in the intervals. Acute occlusion of the bile duct should usually be treated medically until the strength and appetite decline as the cholangitic phenomena predominate and the icterus persists. Icterus with evacuation of stones at each attack, belongs to the internists, as also the rare cases of sterile hydrops, so long as it does not cause trouble. When the colics have led to morphin addiction operation should be done, as also in chronic occlusion of the bile duct, and without delay. He has operated 1131 times during the last twelve years, and 536 of his 655 patients were women. Men, especially fat men, bear the intervention poorly. Women who have borne children are the best subjects. The gallstone affection was complicated by stomach trouble in 12 per cent. He urges internists to be present occasionally at gallstone operations.

72. Vibration Massage to Hasten Expulsion of Kidney Stones.—Klemperer states that in 6 out of 10 cases of renal colic expulsion of the stone followed the application of vibration massage to the affected side. The procedure usually induced a fresh attack of colic, which terminated in the passage of the stone.

77. Arsenical Neuritis.—Janowski concludes from his experience with 3 cases and 129 in the literature that arsenical neuritis has a tendency to spontaneous retrogression. Patience on the part of physician and patient is needed. Early active treatment can do only harm. Electricity is strictly contraindicated in the first and second stages, but after the subsidence of all pains and recovery from muscular atrophy, it can be cautiously applied with massage, baths and passive gymnastics. The greatest relief at first was obtained from large hot compresses applied to the entire extremity, with potassium iodid. Morphin should be used with great caution.

79. Hemorrhage from Erosions in the Stomach.—In both of the cases described by Mintz vomiting was the predominant symptom. It simulated nervous vomiting and was treated six months on this assumption, but without results, until particles of mucosa and blood were discovered in the vomited matters. The trouble can be differentiated sometimes only by the constant finding of scraps, which the microscope shows to be particles of gastric glands. Isolated fragments may occur sporadically in the healthy stomach contents, but their constant recurrence differentiates the erosion. His patients were young women of leisure, whom he treated with lavage of the stomach with a 1 or 2 per 1000 solution of silver nitrate, after copious rinsing, and large doses of bismuth. If the silver lavage is ineffectual the patient should be given a course of treatment as for a gastric ulcer, with general tonic and hygienic measures. One patient recovered after 10 silver lavages. The vomiting occurred during or soon after meals, and there was no pain. Traces of blood in the vomit after six months suggested the true diagnosis.

81. Periodical Neurasthenia.—Pulawski has witnessed 9 cases of this affection which should rather be called periodical exacerbations of a chronic neurasthenia. These exacerbations may last from one hour to a month or longer. They were characterized by depression in his experience. The prognosis seems to be less favorable than in ordinary neurasthenia.

86. Methylene Blue Test of Kidney Functions.—Landau found the results of this test unimportant in 24 subjects on whom it was applied. It can not be relied on alone as a criterion of the functional capacity of the kidneys. Another point to be borne in mind also is that the blue has to be transformed into chromogen, etc., before it can be eliminated through the kidneys. Consequently its elimination depends on this transforming function as much or more, possibly, as on the eliminating capacity of the kidney.

88. Influence of Alcohol on Circulation.—The writer's research fails to show any stimulating action of alcohol on the circulation of blood. The effect was rather to weaken the entire circulatory system.

89. Cultivation of Virus of Variola.—Ishigami announces that all attempts to inoculate animals with pure cultures of bacteria found in variolous and vaccine lymph, etc., proved negative. But he found that he could induce the production of typical vaccine pustules and protective power against variola by inoculating calves with a culture of the protozoa found in the epithelial cells of the vaccine pustules, lymph, etc. These sporozoa grow best on a culture medium made from the epithelial cells of an unvaccinated animal. He claims that the evidence is all in favor of the assumption that these sporozoa are the causal germs of variola.

90. Peculiar Neurosis in Japan.—Sakaki gives cuts showing the attitudes and general aspect of the subjects of this neurosis which is characterized by echolalia, echomimia and echokinesia with abnormal tendency to fright. There are no tics, grimaces nor obsessions. It is probably identical with the neurosis observed by Tokansky in Russia and described in the *Neur. Cbl.*, ix, p. 662.

91. Tuberculosis of the Pharynx.—Kanasugi regards the prognosis of this localization of tuberculosis as the most unfavorable of all, the primary more than the secondary. He eures into sound tissue and applies pure lactic acid.

92. Prophylaxis of Malaria in Formosa.—Koike states that the strict discipline of the Japanese army rendered possi-

ble the application of antimosquito measures on a large scale in this hotbed of malaria. The results, in his own words, were "so excellent as we scarcely heard ever." The barracks were screened and the beds provided with nets. The soldiers were obliged to be in the barracks half an hour before sunset, and the door was locked until half an hour after sunrise. No night duty was required of the corps to which these measures were applied. When any one was known to have been bitten by a mosquito he was removed to an isolated bed and net. The sentinels wore woolen trousers, gloves and mask. All bathing had to be done during the day. Not one of the 114 men in this corps contracted malaria, but a control corps, unprotected, had 32.59 per cent. affected, while 44.09 per cent. of the general force of nearly 700 men had malaria. The prophylactic measures were continued from September to February, and the soldiers were so impressed with the results that they have voluntarily continued the same precautions since, and other companies have begged to be thus protected.

93. Stored Rice and Beri-Beri.—This article asserts that beri-beri causes more than two-thirds of all deaths among the Chinese, and it is continually spreading among the Malays and Chinese. When the Malay grew and garnered his own rice he hulled the daily supply as needed, and beri-beri was unknown. But now imported rice is sold at such low prices that he prefers to buy it and save the trouble of cultivating rice. Beri-beri follows in the track of this imported and stored product.

95. Reducing Luxation of the Humerus.—Maarud has been much impressed with the value of Riedel's method for country practitioners as it dispenses with assistance and requires such brief narcosis.

96. Dispensing in Country Practice.—Bugge holds up to his country men the example of America in regard to the dispensing of medicine in tablets, etc., instead of the old-fashioned methods to which they still cling.

99. Reducing Luxatio Ant. Humeri.—Borchgrevink recommends a method of reducing this luxation based on the principle that when the arm is adducted, the upper wall of the capsule, and especially the coraco-humeral ligament is stretched, which prevents the head from rotating on its axis at that point and compels it to turn toward the cavity of the joint. As the arm is raised the coraco-humeral ligament and the edge of the rent in the capsule become relaxed, while the lower wall of the capsule is drawn taut, and this forces the head near or into its normal position. If it is not already entirely in place, inward rotation will bring it completely into its normal relations. The operation described is in four stages. The dislocated arm is first placed in extreme adduction. The upper arm is then slowly and cautiously twisted over and outward in this position, the elbow still at a right angle, until the front of the arm is in the frontal plane. While this outward rotation is maintained, the upper arm is raised in the sagittal plane to the extent that is possible without application of force. The arm is then rotated inward and the head of the humerus will be found in its cavity.

New Patents.

- Patents of interest to physicians, etc., November 4 and 11:
- 712634. Exercising apparatus. Richard Aronstein, Goldfield, Colo.
 - 712642. Device for administering anesthetics. Albert H. Bishop, Fort Dodge, Iowa.
 - 712643. Device for administering anesthetics. Albert H. Bishop, Fort Dodge, Iowa.
 - 712827. Exercising apparatus. George S. Maxwell, Jersey City, and G. White, Jr., Madison, N. J.
 - 712700. Bed pan. Christian W. Meinecke, Jersey City, N. J., and D. Hogan, New York.
 - 712711. Truss. Eugene J. O'Connor, Westport, New Zealand.
 - 712719. Optical instrument for testing the eyes. Gilbert B. Porter, St. Johns, Mich.
 - 713017. Syringe. Walter H. Pumphrey, New York.
 - 712720. Air bed. Fannie L. Richardson, Corinth, Miss.
 - 712979. Inhaler. Clarence W. Taylor, Sioux City, Iowa.
 - 712989. Electric cautery. Wm. E. Washburn, Cedar Rapids, Iowa.
 - 712746. Sterilizing apparatus. Adolf Watorck, Lemberg, Austria-Hungary.
 - 713395. Separating protoids from non-nitrogenous bodies. John Carstairs, Bradford, England.

713416. Invalid bed and commode. Wm. C. Feely, New York.
 713450. Hernial truss. Charles E. Kenyon, New York.
 713318. Suspensory bandage. Henry C. Lovis, New York.
 713234. Stopper for hot-water bags. Edward E. Menges, New Haven, Conn.
 713488. Vaccination shield. Nils Omsted and M. Iverson, Stoughton, Wis.
 713143. Adjustable pliable truss. Wm. Payne, London, Canada.
 713348. Retinoscope. Seth A. Rhodes, Chicago.
 713515. Apparatus for producing medicinal vapor or liquid from the smoke of green wood. Hamilton E. Smith, Philadelphia.
 723166. Obstetrical tractor. Emilian D. St. Cyr, Chicago.
 713530. Case for surgical instruments. Charles J. Tagliabue, Brooklyn.
 713365. Electromagnetic medical appliance. Francis H. Volley, Allegheny, Pa.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, by orders from the Adjutant-General's Office, Washington, D. C., from November 15 to 20, inclusive.

Brewer, Isaac W., contract surgeon, U. S. A., now in this city, will proceed to Fort Huachuca, Ariz., and report in person to the commanding officer of that post for duty.

Cable, George W., contract surgeon, U. S. A., leave of absence granted in Special Order No. 177, Sept. 25, 1902, Department of Texas, is extended one month.

Dale, Frederick A., first lieutenant and asst.-surgeon, U. S. A., now at San Francisco, is relieved from further duty in the Division of the Philippines and from duty as transport surgeon on the transport *Sumner*, and will proceed to this city and report in person to the commanding officer of the U. S. General Hospital, Washington Barracks, for duty.

Eber, Albert H., captain and asst.-surgeon, U. S. Vols., is honorably discharged from the service of the United States by the Secretary of War, to take effect Dec. 31, 1902.

Eber, Albert H., captain and asst.-surgeon, U. S. Vols., is granted leave of absence to include Dec. 31, 1902.

Glennan, James D., surgeon U. S. A., is granted leave of absence for one month, to take effect on his relief from duty at the U. S. Military Academy.

Henderson, Albert B., first lieutenant, asst.-surgeon, U. S. A., is directed by the Secretary of War to report in person to Brigadier-General Frederick Funston, U. S. A., president of the Army Retiring Board, appointed to meet at Denver, at such time as he may designate, for examination by the board. On the completion of his examination Lieutenant Henderson will return to the place of receipt by him of this order.

Long, Stephen M., contract surgeon, U. S. A., is relieved from duty at Alcatraz Island, Cal., and will proceed to Fort Duchesne, Utah, and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the Colorado.

Lyon, Palmer H., captain and asst.-surgeon, U. S. Vols., now serving in the Division of the Philippines, is honorably discharged by the Secretary of War, from the service of the United States, to take effect Dec. 31, 1902, his services being no longer required.

Madara, James W., captain and asst.-surgeon, U. S. Vols., now serving in the Division of the Philippines, is honorably discharged by the Secretary of War, from the service of the United States, to take effect Nov. 21, 1902, his services being no longer required.

Mabry, William C., contract surgeon, U. S. A., is granted six days' leave of absence.

McAndrew, Patrick H., first lieutenant and asst.-surgeon, U. S. A., is relieved from duty in the Division of the Philippines, and will proceed to San Francisco, and on arrival report by telegraph to the Adjutant-General of the Army for further orders.

McCaw, Walter D., major and surgeon, U. S. A., is detailed to represent the Medical Department of the Army at the General Sanitary Convention of American Republics, to meet in this city Dec. 2, 1902.

Rockhill, Edward P., first lieutenant and asst.-surgeon, U. S. A., is detailed as a member of the examining board convened at the Presidio of San Francisco, by Paragraph 9, Special Order No. 207, Sept. 9, 1902, vice Captain John S. Kulp, asst.-surgeon, hereby relieved.

Sinks, Edward D., contract surgeon, U. S. A., now at the U. S. General Hospital, Fort Bayard, N. M., will report in person to the commanding officer of that hospital for duty.

Navy Changes.

Changes in the Medical Corps of the U. S. Navy, for the week ending Nov. 22, 1902:

Surgeon W. R. DuBose, ordered to the Navy Yard, League Island, Pa., for duty in connection with fitting out the *Maine*, and ordered to the *Maine*, when that vessel is placed in commission.

P. A. Surgeon T. W. Richards, detached from the bureau of medicine and surgery, Navy Department, and ordered to the *Arkansas*.

P. A. Surgeon E. O. Huntington, unexpired portion of sick leave revoked; ordered to the Naval Hospital, New York City, for treatment.

P. A. Surgeon W. H. Bucher, sick leave extending one month. Orders received from senior squadron commander of Asiatic Station.—P. A. Surgeon E. M. Shipp, detached from duty at Port Isabel, P. I., and ordered to the Naval Station, Cavite, P. I.

Asst.-Surgeon C. M. Oman, detached from the Naval Station, Cavite, P. I., and ordered to duty at Port Isabel, P. I.

Pharmacist C. McLarty, reported at the Navy Yard, Norfolk, Va., October 7.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Nov. 20, 1902:

Assistant Surgeon-General J. H. White, granted seven days' extension of leave of absence from November 24.

P. A. Surgeon L. E. Cofer, department letter granting leave of absence amended so that said leave shall be effective up to and including December 10.

P. A. Surgeon S. B. Grubbs, granted leave of absence for one month from December 8.

Asst.-Surgeon L. D. Fricks, relieved from duty at Savannah, Ga., and directed to proceed to Cape Fear Quarantine Station, and assume temporary command, relieving Asst.-Surgeon T. B. McClintic.

Asst.-Surgeon V. G. Heiser, to report to Assistant Surgeon-General L. L. Williams, chairman of Board of Examiners, for examination to determine his fitness for promotion to the grade of passed assistant-surgeon.

Asst.-Surgeon T. B. McClintic, on being relieved from duty at Cape Fear Quarantine Station, to proceed to Washington, D. C., and report to the director of the Hygienic Laboratory for duty.

Asst.-Surgeon W. A. Korn, leave of absence granted for 21 days from November 18, revoked.

Asst.-Surgeon T. D. Berry, department letter granting leave of absence on account of sickness, amended so that it shall be for one month and 27 days.

Asst.-Surgeon Edward Francis, to proceed to New York City for special temporary duty.

Asst.-Surgeon W. C. Rucker, relieved from duty at San Francisco, and directed to proceed to Reedy Island Quarantine Station and report to medical officer in command for duty and assignment to quarters.

A. A. Surgeon P. N. Barnesby, granted leave of absence for 21 days from November 10.

A. A. Surgeon L. P. Gibson, granted leave of absence for 10 days from Nov. 12, 1902, on account of sickness.

BOARDS CONVENED.
 Board convened at Washington, D. C., Nov. 18, 1902, for the examination of Asst.-Surgeon V. G. Heiser to :
 for promotion to the grade of passed assistant :
 the Board: Assistant Surgeon-General L. L. Williams, chairman; Assistant Surgeon-General G. T. Vaughan; Asst. Surgeon H. D. Geddings, recorder.

Board convened at the Marine-Hospital, San Francisco, Nov. 24, 1902, for the physical examination of a candidate for appointment as second assistant-engineer, Revenue Cutter Service. Detail for the Board: P. A. Surgeon W. G. Stimpson, chairman; P. A. Surgeon A. R. Thomas, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 22, 1902:

SMALLPOX—UNITED STATES.

California: San Francisco, Nov. 2-9, 2 cases; Stockton, Oct. 1-31, 3 cases; Stockton, Nov. 1-13, 1 case.

Colorado: Denver, Nov. 1-8, 7 cases.

Indiana: Indianapolis, Nov. 8-15, 2 cases.

Kansas: Wichita, Nov. 8-15, 1 case.

Louisiana: New Orleans, Nov. 8-15, 1 case.

Maine: Nov. 8-15, Biddeford, 3 cases; Portland, 1 case.

Massachusetts: Boston, Nov. 8-15, 20 cases, 2 deaths; Cambridge, Nov. 8-15, 1 case, 1 death; Marlboro, Nov. 1-15, 7 cases; Taunton, Nov. 8-15, 1 case; Weymouth, Nov. 8-15, 1 case; Worcester, Nov. 7-14, 1 case.

Michigan: Nov. 8-15, Detroit, 31 cases; Grand Rapids, 6 cases. New Hampshire: Nov. 8-15, Manchester, 2 cases; Nashua, 16 cases.

New Jersey: Nov. 8-15, Camden, 3 cases; Newark, 1 case.

New York: New York, Nov. 8-15, 2 cases.

Ohio: Cincinnati, Nov. 7-14, 3 cases; Cleveland, Nov. 8-15, 21 cases, 4 deaths; Dayton, Nov. 8-15, 3 cases; Youngstown, Nov. 1-8, 1 case.

Pennsylvania: Altoona, Nov. 10-17, 3 cases; Erie, Nov. 8-15, 4 cases; Johnstown, Nov. 8-15, 5 cases; McKeesport, Nov. 8-15, 4 cases; Philadelphia, Nov. 8-15, 3 cases; Pittsburgh, Nov. 8-15, 25 cases, 7 deaths.

Utah: Salt Lake City, Nov. 8-15, 1 case.

Wisconsin: Milwaukee, Nov. 8-15, 10 cases.

SMALLPOX—FOREIGN.

Barbadoes: Oct. 12-25, 146 cases.

Austria: Prague, Oct. 25-Nov. 1, 14 cases.

France: La Rochelle, Oct. 19-26, 1 death; Rheims, Oct. 10-Nov.

2, 1 case, 1 death; Roubaix, Oct. 1-31, 1 death.

Great Britain: Leeds, Oct. 25-Nov. 8, 3 cases; Liverpool, Oct. 25-

Nov. 1, 3 cases; Manchester, Oct. 25-Nov. 1, 1 case.

India: Bombay, Oct. 7-21, 6 cases; Calcutta, Sept. 27-Oct. 18, 1 case; Madras, Oct. 4-10, 1 death.

Italy: Milan, Sept. 1-30, 1 case; Palermo, Oct. 18-Nov. 1, 2 cases.

Russia: Moscow, Oct. 18-25, 1 death.

Straits Settlements: Singapore, Sept. 20-27, 6 deaths.

Turkey: Constantinople, Oct. 19-Nov. 2, 2 cases.

YELLOW FEVER.

Colombia: Panama, Nov. 3-10, 4 cases.

Mexico: Nov. 1-8, Coatzacoalcas, 2 cases, 1 death; Tampico, 7

deaths; Vera Cruz, 10 cases, 6 deaths.

CHOLERA—INSULAR.

Philippine Islands: Sept. 21-27, Manila, 43 cases, 36 deaths;

Provinces, 5,583 cases, 3,560 deaths.

CHOLERA—FOREIGN.

China: New Chwang, Sept. 13-20, 25 cases, 25 deaths.

India: Bombay, Oct. 7-21, 2 deaths; Calcutta, Sept. 27-Oct. 18,

47 deaths.

Japan: Kobe, Oct. 11-18, 24 cases, 12 deaths; Nagasaki, Oct. 11-

20, 61 cases, 41 deaths.

Java: Batavia, Sept. 27-Oct. 4, 42 cases, 38 deaths.

Straits Settlements: Singapore, Sept. 21-27, 22 deaths.

PLAGUE—FOREIGN.

China: Hongkong, Oct. 4-11, 1 case, 1 death.

India: Bombay, Oct. 7-21, 142 deaths; Calcutta, Sept. 27-Oct. 18,

25 deaths; Karachi, Oct. 12-19, 13 cases, 9 deaths.

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No. 24.

Address.

A REVIEW OF CURRENT PEDIATRIC LITERATURE.

CHAIRMAN'S ADDRESS, DELIVERED BEFORE THE SECTION ON
DISEASES OF CHILDREN, AT THE FIFTY-THIRD ANNUAL
MEETING OF THE AMERICAN MEDICAL ASSOCIATION,
AT SARATOGA SPRINGS, N. Y.,
JUNE 10-13, 1902.

H. M. McCLANAHAN, A.M., M.D.
OMAHA.

For the honor of being elected Chairman of this Section I am deeply grateful, and again thank you most sincerely. It has been my earnest effort during the year to interest members in this Section and enlarge its sphere of influence commensurate with its importance. I am deeply grateful to the members of the Executive Committee for their valuable advice and timely suggestions.

It is with pleasure that I acknowledge my indebtedness to the Secretary, Dr. Frank X. Walls. I thank him most sincerely for his hearty co-operation and many valuable suggestions. The program now before you is sufficient evidence that he has discharged the duties of his office faithfully and with ability.

RECOMMENDATIONS.

The following recommendations are offered for your consideration: First. I renew the recommendation Dr. Tuley made in 1899, that a committee on necrology be appointed, and suggest that this committee consist of three members appointed for one, two and three years respectively. This will make the committee continuous and some of the members will be constantly in touch with the interests of the Section. It is only just to those who have contributed to the welfare of this Section that when their life's work is ended some recognition be accorded to their memory. Such recognition would also be an incentive to members to take an active part in the work of the Section.

Second. I believe it would increase the interest and welfare of the Section if we had a permanent list of members, and suggest that all those who are members of the American Medical Association, and who have registered in this Section for two consecutive years, have their names and addresses printed in the volume of the annual transactions. This would encourage members to register in this Section, and I am certain it would be a great benefit to the officers of the Section. It would relieve them of the humiliation of inviting those to contribute who, *not being members of the American Medical Association*, are not eligible to participate in its deliberation.

Third. It would certainly enhance the welfare of the

Section if there were more of a community of interest between those who attend its meetings. As it is, we meet for three or four days in the year and then return to our homes in widely dispersed parts of the country. Our private work so fully occupies our time that no consideration is given to the Section until the next meeting. If some work could be carried on during this interim, whereby the attention of the members would be called to the affairs of the Section, it would certainly be advantageous. To this end I would recommend that a committee be appointed whose duty it would be to conduct a collective investigation on certain scientific subjects. You are all aware of the splendid results accomplished by the American Pediatric Society; that our knowledge of *scorbutus* and the use of antitoxin have been largely enhanced as a result of their labors. Similar investigation conducted by members of this Section would in no way be antagonistic to the work of that splendid organization. In addition to the valuable information obtained, such work would have the distinct advantage of centering the interest of the members in this Section. The serious objection that might be urged is that the work would involve a considerable outlay of money. However, as the end would justify the means, I have no doubt that some way of providing the necessary funds could be devised.

INDEX OF CURRENT PEDIATRIC LITERATURE.

In compliance with Section 4, Chapter IX, of the Constitution, I present briefly for your consideration a short review of the current pediatric literature. The source of my information in looking up this literature was the index medicus published in the *Medical Review of Reviews*. There were many papers in other departments, dealing in a large measure with *pediatric subjects*. These I have not taken into account in my review. There have appeared during the year 477 articles in medical journals published in this country alone on distinctly pediatric subjects. Of this number I have read 200 articles in full; of the remaining 277 I have read abstracts as they appeared during the year in a number of the leading medical journals. These articles I have classified as carefully as possible.

GASTROINTESTINAL DISEASES.

On diseases of the digestive organs there were 62 papers, a large number dealing with summer diarrheas. That which impressed me most in this series was the practicable unanimity of the authors, both as to the cause and treatment of this important group of maladies. Some of these papers were valuable because they gave results of treatment in a large series of cases. The rise and progress in our knowledge of intestinal infections is graphically illustrated in the presidential address of Dr. Booker before the American Pediatric Society. It is

remarkable, but true, that almost our entire knowledge has been acquired within the last twenty-five years. As a result of the clearer knowledge and greater interest in this class of diseases, thousands of lives are now annually saved. The principles of treatment are now so well established that they have become a common property of our profession. Indeed, the means of prevention are now so largely known among the laity that these diseases are becoming less frequent. On the subject of treatment I could not fail to note that less dependence is placed on the use of drugs than in former years. It was apparent in the entire series of papers. It is also evident that greater reliance is placed on the application of hydrotherapy in the treatment of this entire group. The various methods of applying water and the objects to be attained in its use were clearly set forth in some of the papers.

There were five papers on the subject of appendicitis. The youngest case reported was that of an infant of three months. It is doubtless true that appendicitis is more rare in infants than in children or adults. The possibility of its occurring even in the very young should not escape our attention. Dilatation of the stomach in bottle-fed infants was alluded to in several articles.

That this condition is the result of food lacking in nutritive elements is well established. There were papers on constipation, intestinal sapremia, vomiting and indigestion. It is coming to be more fully realized that indigestion is usually a result of improper feeding.

INFANT FEEDING.

On the important subject of infant feeding there were 28 articles. Some of these were of the highest order. The year's literature on this subject is most satisfactory, showing important advancement in our knowledge and a wider appreciation of the importance of careful scientific study of this subject. I am convinced that erroneous impressions prevail among many members of our profession concerning the real knowledge on this subject. There are those who believe that infant feeding is in a chaotic state. That the authorities are widely at variance among themselves, and that consequently it is not worth while to give the subject careful study. It is unfortunate that such an impression prevails. It would have been well if every physician had read this series of articles, because a careful reading of them would have convinced any candid physician that such an impression is entirely erroneous. The differences of opinion are on minor matters, and are only such as naturally obtain among independent, original investigators, and do not affect the most important principles. This subject is so important that at the expense of mentioning matters entirely familiar to you all I will briefly state the important phases of the subject on which there is an entire unanimity of sentiment, as established by this series of papers:

1. Cow's milk is now recognized as the universal substitute for human milk.

2. The necessity of procuring more wholesome milk supply, including the care, feeding and housing of the cow, cleanliness in milking, bottling and transporting of the milk.

3. That contaminated milk can not be made pure and wholesome by any process known to science. This important fact, now generally recognized by original investigators, is not duly appreciated by many physicians.

4. That infants differ in their ability to digest food, and that each one requires special study. It is just here

that the question of judgment and accurate knowledge is essential to success.

5. That milk should be modified in order to adopt it to the needs of the infant. On details of modification there are differences of opinion, but these differences are on minor matters. I could not fail to note that even in these minor details there was a greater unanimity of opinion than I had supposed. I think the false impressions on our real knowledge of this subject are the results of the fact that some discussions on it have been sharp and acrid, but I repeat that these discussions were not on well-established principles, but on minor details. The advance in this field of pediatrics within the last ten years is nothing less than marvelous, and should be highly gratifying to all those who are giving the subject careful attention. It is probably only just to state that the advance has been largely the result of the work of investigators of our own country. I venture the assertion that in no field of medicine or surgery have the results of increased knowledge been of greater benefit to mankind in the actual saving of life than in the domain of infant feeding.

In view of the fact that during the year there was almost no literature on the subject of breast feeding, the question suggested itself to me whether or not this subject was being neglected. In improving the method of bottle feeding, are we not in danger of neglecting the subject of normal lactation? The responsibility of the physician in this matter is very great. His counsel is usually sought and his advice generally accepted. The important question suggests itself: What is his moral duty? This question is rightly within the province of this Section. I leave it with you for further consideration.

THE INFECTIOUS DISEASES.

Infectious diseases received consideration in 32 articles. Forty-five of these were on the subject of diphtheria. The knowledge of the profession as a whole on this disease is probably more complete than on any of the other acute diseases. I believe this is due to the comparative large volume of current literature on the subject. The papers during the year have not, as far as I could discover, developed anything new, either in pathology or treatment, but rather have made the existing knowledge more clear and widely disseminated, and have established the specific treatment more permanently.

On the treatment of diphtheria by antitoxin there is an almost unanimity of sentiment. I found but two arguments against the efficacy of this remedy. They were, first, that many cases were now diagnosed as diphtheria that formerly passed under some other name, and, second, that diphtheria is a milder disease than in former years. In view, however, of the experience of a large number of observers who have treated the disease for many years, these arguments have very little weight. I did not find in all these papers the record of a single death attributed to the use of this remedy. Two most enthusiastic articles on the efficacy of antitoxin were in homeopathic journals. This is certainly a triumph for rational scientific medicine and heralds the dawn of better days. The perusal of these articles demonstrates the following facts: The use of the remedy at the earliest possible moment, its repetition within a few hours, if appreciable benefit is not received, and the injection of larger doses than were recommended a few years ago.

Frequently I find that the term membranous croup is still implied to designate a condition other than diphtheria. It is unfortunate that there are physicians

still in active practice who fail to realize that acute laryngeal stenosis is usually diphtheritic in character. At this day, in the light of modern science, it is almost criminal that physicians should permit children to die of suffocation without giving them the benefit of antitoxin.

Scarlet fever received consideration in 18 papers. The most important additions to current literature of this disease were the contributions of Dr. Class of Chicago. It seems probable that the organism causing this disease has been isolated. At any rate, his work is valuable and is worthy of emulation. The diagnosis of the milder type of scarlet fever received some attention. These cases require careful scrutiny. A thorough examination of the throat is important in differentiating milder scarlet fever from cutaneous rashes due to other causes. There are a few reports of the use of serum in septic cases. There was one able paper on the importance of the careful treatment of the nasopharynx in the cases with severe angina. Middle-ear complications are now generally recognized, but the operation of paracentesis does not receive sufficient consideration. The relation of scarlet fever to diphtheria is still under discussion. The weight of opinion is that the membranous sore throat of scarlet fever is seldom due to the diphtheria germ. Reports indicate that scarlatinal nephritis is usually the sequel of mild cases of the disease.

There were 14 papers on the subject of measles. I noted the frequency with which measles is associated with some other acute disease. There can be no question of the value of the Koplik spots in diagnosis of measles in the prodromal stage. I have recently had the opportunity of observing measles during the recent epidemic in my city, and had frequent opportunities of making the proper diagnosis two or three days before the appearance of the eruption. The most frequent and serious complication of measles is catarrhal pneumonia. Laryngitis, causing severe stenosis, was several times mentioned, and, indeed, some cases reported. Otitis media as a complication of measles was several times mentioned. The importance of this complication is not duly appreciated. A few cases of severe nasal hemorrhage were mentioned. The most important fact brought out in these papers on the treatment of this disease was the necessity of care during the prodromal stage.

There were eight papers treating of the subject of whooping cough. The frequency of the association of whooping cough with measles was noted in more than one paper. The mortality in whooping cough is in direct proportion to the age. I noted the report of one death due to cerebral hemorrhage, two cases of subconjunctival hemorrhage and one case of hemorrhage from the ear. Of the remedies used in controlling this disease antipyrin received the most consideration. In one article a series of cases were reported as being controlled by the introduction of carbonic acid gas into the bowel. The results of this treatment were most gratifying. The number of cases, however, was not sufficiently large to admit of any positive conclusion being drawn.

There were three articles on chicken-pox and two on smallpox. These articles were valuable in demonstrating the distinction between these two diseases. Both papers were based on the study of a large number of cases in institutions where careful observations were possible. In both reports the greater number of the children had previously had chicken-pox. The period of incubation was accurately determined in a number of

cases, the length of this period being three days. The prodromal symptoms of smallpox, as noted in these papers, did not differ from those in adults. The subject of vaccination received almost no attention. In view of the prejudice among the laity against vaccination the importance of care in this operation is very great. I fear that much of the prejudice is the result of carelessness among physicians.

RESPIRATORY DISEASES.

On diseases of the respiratory tract, including pneumonia, bronchitis, asthma and empyema, there were 31 articles. It is manifest from this series of papers that secondary pneumonia in infants is the most serious and fatal disease of childhood. The literature on the bacteriology of pneumonia was meager and confirms what is already known that it is usually a mixed infection. Further research in this direction is needed. The diagnosis of catarrhal pneumonia is often difficult. Dependence must be placed on the general symptoms as well as the physical signs. On the treatment of this important disease the following statements can be safely made as conveying a sentiment of the writer: Supporting treatment, including the use of alcoholic stimulants and careful attention to the diet. The tendency to the use of local applications is less than in former years. The remedies most frequently recommended are strychnia, digitalis and steam inhalation. Judging from the literature empyema is frequently overlooked. In any pneumonia going beyond the fourth week careful examination of the chest should be made for a possible empyema. When this condition is present, prompt surgical treatment is always indicated. As to the cause of asthma two theories are advanced, one, that it is a neurotic element, the other is that it is due to uric acid diathesis.

TUBERCULOSIS.

On the subject of general tuberculosis there were 17 articles, not including those on the surgical treatment of tubercular affections. The most valuable papers of this group were those treating on the early symptoms. It seems entirely probable that there is a condition of ill health preceding the gross manifestations of tubercular lesions, and that it should be the effort of the physician to recognize this condition. The importance of glandular tuberculosis and its careful diagnosis is not as yet fully appreciated. The question of the infections of the infant by means of cow's milk is yet an open question. The drugs most frequently recommended were guaiacol and iron. On the general treatment, the important factors are the improvement of nutrition by means of proper foods, fresh air and sunshine.

MALNUTRITION DYSCRASIAS.

On the general subject of diseases of nutrition there were the following: Rachitis, 7; scorbutus, 13; marasmus, 6; cretinism, 5; anemia, 4. Our literature on this important group of diseases is meager. There is here a field for missionary work. Without doubt many cases of scorbutus, for want of more widely diffused knowledge, go astray under some other name. A correct diagnosis is more important than in most diseases of infancy, because of the fact of its prompt response to proper treatment. The results of the splendid work of the American Pediatric Society on these diseases are not as generally known as they should be. There were some good papers on the early symptoms of rachitis. It is entirely probable that this condition is caused by foods lacking in fats. The influence of the race as a predisposed cause is well established. Cretinism deserves further study at

your hands. A collective report on this condition would be of very great value.

TYPHOID FEVER.

There were 11 articles on this subject of typhoid fever in children. The literature on this disease is interesting and instructive and includes a considerable amount of original work. The value of the Widal test in the diagnosis of typhoid fever is valuable and its employment in a large number of cases will yield practical results. The conclusion drawn from this literature is that typhoid fever is mild in the infant and that there are fewer complications, consequently the prognosis is better than in the adult.

THE BLOOD AND THE NERVOUS SYSTEM.

On the diseases of the nervous system there were 25 articles. The strictly pediatric literature on this important subject impressed me less favorably than any of the other groups. This is a department of pediatrics requiring careful study and more accurate observation. The limited number of papers on so important a disease as chorea will indicate that the subject does not receive the attention its importance demands. The most valuable lesson derived from this series of papers was the relation between anemia and nervous diseases. In a paper on the subject of hydrocephalus I was impressed with the treatment suggested. This consists in the gradual withdrawal of the fluid and at the same time the introduction of sterilized air. Any treatment that offers a hope of benefit in this condition is worthy of further trial.

There were six articles on the blood. These were, without exception, valuable papers. I call attention to this series because investigations in this line indicate a promising field. As far as I could ascertain the number of examinations of the blood in health and disease is yet too limited to permit of positive conclusions being drawn. This is an inviting field of research for the young physician with a modern education. A large series of careful observations will necessarily lead to the accumulation of practical knowledge.

OTHER DISEASES.

On diseases of the newly born there were 31 articles, including papers on ophthalmia, icterus, hemorrhage, tetanus, sepsis and developmental defects. This was an interesting group of papers on a subject receiving scant consideration from many in our profession. I am convinced that a careful investigation of the subject of causes of death of the newly born would yield practical results.

There were 25 articles on diseases of the genito-urinary system. The most striking fact ascertained from these series of papers was that the operation of circumcision is coming more and more into favor. There were a number of papers on enuresis. I am convinced that the treatment of this condition is in many cases unsatisfactory, and that it is a symptom indicating some general defect, rather than any local lesion.

Surgical pediatrics received consideration in 25 articles. This is a small volume of literature when we consider the number of operations indicated in infancy. There were two interesting papers on the subject of spinal anesthesia. The objection to this method of anesthesia in adults is that the patient is conscious of what is going on about him, and, while relieved of physical suffering, he endures mental anguish. This objection does not have the same force in infancy. Again, there were a few cases reported of infants suffering from pneumonia, in whom general anesthesia was contrain-

dicated, and who were operated on safely and without pain by means of spinal anesthesia. This important and humane field of pediatrics is well worthy the careful study and attention of physicians.

There were 84 articles on a large number of miscellaneous subjects. For lack of time I shall not make any comment on this group.

THE IMPORTANCE OF PEDIATRIC LITERATURE.

Viewing this mass of current pediatric literature as a whole it indicates growth and increased interest in the diseases of children. However, it is my deliberate judgment that it is not up to the standard of the current literature in other branches of medicine. Current medical literature is exceedingly important for many reasons especially because it has more influence in molding public sentiment than standard text-book literature. The busy physician will read his medical journal when for want of time he will not study standard text-books. It is essential, therefore, that current medical literature shall be of the highest order and shall embody the best thought of the profession. Pediatric literature covers a wide field; it touches all branches of medicine, both scientific and practical. It is of equal importance from every point of view with the literature of any other branch of medicine. On those interested in pediatrics rests the responsibility for the quality of the literature. I therefore urge on the members of this Section the necessity of recognizing their duty in this respect. Your sense of pride as well as your desire to be useful in your profession require that you do your part in extending and enlarging the volume and improving the quality of current pediatric literature, so that it shall at least equal, if not excel, the current literature in other branches, in literary excellence, in clinical observation and in original research.

Original Articles.

A CRITICAL REVIEW OF 416 CASES OF APPENDICITIS

OPERATED ON IN THE GERMAN HOSPITAL, PHILADELPHIA, IN 1901.*

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GENERAL STATISTICS.

There were operated on during the year 1901 in the German Hospital and the children's wards of the Mary J. Drexel Home 416 cases of appendicitis.¹ Of this number there were 279 acute cases, of which 238 were adults and 41 children, under twelve years of age.

There were operated on 137 cases of chronic inflammation of the appendix, of which 134 were adults and 3 children. The mortality in acute cases in adults was 37, or 15.5 per cent.; in children there were 6 deaths, or 14.6 per cent.: making a total death rate in acute cases operated on of 15.3 per cent. This list includes one child who died three months after operation from purulent peritonitis and septic nephritis with uremia; one who died on the table of ether shock, having had general purulent peritonitis at time of operation. The mortality statistics will be considered later and for the present we will take up a consideration of the entire number of cases.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.
1. The statistics of this paper were compiled by Dr. Geo. P. Müller, house surgeon German Hospital.

There were 137 chronic cases with one death, a mortality of 0.7 per cent. This death was the result of an acute intestinal obstruction. The obstruction was caused by a loop of small bowel becoming engaged in a rent in the mesentery. These figures speak for themselves and demonstrate beyond question the possibility of removing the appendix at the opportune time with practically no mortality.

ETIOLOGIC FACTORS.

Sex.—In adults, in the acute cases, males were the subject of the disease in 145 cases and females in 83 cases. In children there were 31 males and 10 females.

Age.—The ages of patients at the time of attack were as follows: 1 to 10 years, 23 cases; 10 to 20, 72; 20 to 30, 102; 30 to 40, 49; 40 to 50, 21; 50 to 60, 8; 70 to 80, 1; not noted, 3, the youngest patient being 4 years and the oldest 77.

Gastro-Intestinal Disturbances.—In 86 cases there was a history of some digestive disturbance, usually dyspepsia, prior to the initial attack of appendicitis. Constipation occurred in 162 cases, diarrhea in 36, normal bowels in 67, not noted in 13, vomiting in 191, nausea in 15, absence of nausea or vomiting in 62, not noted in 12.

COMPLICATIONS.

Tumor.—A mass in the right iliac fossa was demonstrated clinically in 104 cases.

Sepsis.—Pus infection with abscess formation was encountered in 174 cases as follows: Post-cecal, adults 29, children 12; right iliac fossa, adults 35, children 1; pelvis, adults 20, children 14; and in the following found only in adults: outer side of cecum 21, free pus (not confined) 18, in appendix only 13, to median side of cecum 2, free cloudy serum 4, sub-hepatic 3, multiple 1, extraperitoneal 1.

Adhesions.—These were encountered in 189 instances, 155 adults, 34 children.

Necrosis.—This occurred as follows: Appendix, adults 75 cases, children 31; cecum only, adults 4, children 1; small bowel, adults 1; cecum and appendix, adults 7; mucous membrane of appendix alone, 4; semi-gangrenous condition of appendix and cecum, 22; total, 145 cases.

Perforation.—There was perforation as follows: Appendix, adults 41, children 32; cecum, adults 3; appendix sloughed from cecum, adults 8; total, 84 cases.

Attention is drawn to the fact that in 299 acute cases pus was encountered 174 times; necrosis of the appendix, cecum or small bowel, 145 times, and perforation 84 times. Are not these figures a convincing argument against delay in operating on this really terrible disease? If they are not, then stop and think that 15.3 per cent. died as a result of a continuance of the acute inflammation while 99.3 per cent. of those operated on at a time of election recovered, not only from future attacks, but from the disease.

Peritonitis.—Local, adults 104 cases, children 4; general, adults 25, children 23. In 11 adults the general infection was purulent and all of these died. It will thus be seen that a general infection, while much more common in children than in adults, is not nearly so fatal, probably due to a higher resisting power of children to peritoneal infection, a fact that is true in other forms of infection in other localities.

Drainage.—In 154 cases drainage was used, gauze wicks, glass tubes and rubber tubes being the three methods employed.

Appendectomy.—The appendix was removed in 269

cases, was not removed in 7, and had sloughed off from the cecum in 3.

Intestinal Obstruction.—Post-operative obstruction occurred in 10 cases, of which 4 recovered from a second operation and 6 died. In 9 of the 10 cases the obstruction was due to the adhesive inflammation in the right iliac fossa, which continued to be active after the removal of the organ and the breaking up of the existing adhesions. In the tenth case it was due to accidental causes; the wound, which had been closed with layer sutures of catgut, was forced open by a violent fit of coughing. While attempting to replace the protruding bowel, infection was introduced and the patient promptly developed peritonitis and obstruction, causing his death. It is a very fatal accident, as these figures show 6 of the 10 dying as a direct result; a mortality of 60 per cent. The condition was recognized very early in every instance and operation instituted at once, but with the above result. These facts lead us to believe that the early operation in the primary attack is, after all, the safest procedure.

Fistula.—Fecal fistula appeared in 11 cases, 3 on the fifth day, 1 on the sixth day, 1 on the seventh day, 1 on the thirteenth day, 1 on the seventeenth day, and in 4 the day of appearance was not noted. Four cases closed spontaneously, one was operated on and recovered, 6 cases left the hospital with fistula, one of which returned during January, 1902, was operated on and discharged from the hospital, recovered. All of these were in late cases, where the intensity of the highly destructive inflammation resulted in gangrene of the cecum or neighboring bowel and made the false passage inevitable. In one case, a man operated on late in the attack, there was an opening in the posterior wall of the cecum, the edges of which and a surrounding area of cecal wall one inch in diameter were gangrenous and would not hold the stitches. The man, however, did not develop a fistula, evidently due to the fact that the opening, which was in the posterior wall of the cecum, came in contact with the posterior layer of the peritoneum covering the right iliac fossa and there became adherent. That four of the cases healed spontaneously can hardly be offered as a valid reason for waiting until the structures involved in the inflammatory area are in such a state of pathologic decomposition that unhappy results become almost inevitable.

TIME OF OPERATION.

Of the cases operated on, a large percentage gave a history of being admitted during the first attack; however, over 80 gave a history of attacks of indigestion or more or less persistent digestive disturbances, with constipation or irregularity of the bowels associated with pain. It is impossible to arrive at a definite knowledge of the importance of these intestinal troubles, and just what relationship they bear to attacks of appendicitis. It is fair to presume, however, that a good proportion, if not the majority, have had previous attacks, probably mild and transitory, but none the less real attacks. This presumption is based on the fact that patients and frequently family physicians do not recognize early attacks, particularly if they be mild and transitory in character, passing them by as attacks of bilious colic, dyspepsia, etc.

Time Between Onset and Operation.—The time elapsed between onset of attack (acute) and time of operation is as follows: 5 hours in 2 cases, 8 in 2 cases, 12 in 5 cases, 14 in 1 case, 16 in 2 cases, 18 in 2 cases,

20 in 1 case, 24 in 18 cases, 30 in 1 case, 36 in 4 cases, 40 in 35 cases, 50 in 1 case, 3 days in 29 cases, 4 in 25 cases, 5 in 18 cases, 6 in 12 cases, 7 in 29 cases, 8 in 9 cases, 9 in 5 cases, 10 in 13 cases, 11 in 5 cases, 12 in 4 cases, 14 in 24 cases, 19 in 1 case, 3 weeks in 11 cases, 7 in 1 case, 8 in 1 case, 10 in 1 case, 6 months in 1 case.

MORTALITY STATISTICS.

There were thirty-seven deaths from acute appendicitis in adults during 1901, a mortality of 15.5 per cent.; 34 were males and 3 were females. The age varied from 14 to 77 years, averaging 34 years. In decades there were from 14 to 25 years 15 cases, 25 to 40 years 11 cases, and 40 to 77 years 11.

Previous Attacks.—11 cases were in the initial attack, 7 had 1 previous attack, 2 had 2 previous, 4 had 3 previous, 10 had several previous, and in 3 cases the number of attacks was not stated.

Of the fatal cases which were operated on in the first attack there are several important facts to be noticed. In one case the death was attributed to the accidental breaking open of the wound and subsequent intestinal obstruction and peritonitis. In another case, operated on within twenty-four hours, there existed at the time of operation a general purulent peritonitis. The other cases had been ill with the disease from forty-eight hours to two weeks. All but one had abscess and most of them necrosis. The one exception was the patient who died on the sixteenth day after operation of uremia. Another had in addition to an appendiceal abscess, a carcinoma of the cecum.

PREVIOUS DISEASE AND FAMILY HISTORY.

In two cases there was a family history of phthisis. Case 14 had scarlet fever one year previous to the appendicitis attack, accompanied by nephritis. Ten days after operation she developed uremia and died on the sixteenth day after operation. Case 32 had performed several abortions on herself, each time with severe systemic disturbances, the last one was three days before the onset of the appendicitis attack. Case 36 had all the exanthemata of childhood, including scarlet fever. He had enteric fever and influenza in early adult life. He died of sepsis after a hard fight, fourteen days after operation.

Urine.—Three patients, on admission, were found to have a well-marked nephritis, though none of these died of uremia. Nearly all the cases showed traces of albumin, including three cases dying of nephritis. Every case gave albumin and casts after etherization.

Bowels.—Previous constipation is mentioned in 22 cases and diarrhea in 2 cases, just preceding the attack and followed by constipation after the onset. The bowels were regular in 7 cases.

Stomach.—Chronic dyspepsia is noted in 30 per cent. of the cases.

SUMMARY OF SYMPTOMS.

Admission to Hospital.—The patients were admitted from 8 hours to 14 days after the onset of the last attack, averaging 6 days, as follows: Within 24 hours 3 cases, after 2 days 5 cases, after 3 days 5, after 4 days 5, after 5 days 1, after 6 days 4, after 7 days 4, after 8 days 2, after 10 days 2, after 11 days 1, after 12 days 1, after 14 days 4.

Temperature and Pulse.—The temperature on admission varied from 97.4 to 102.6 and averaged 100.2. The pulse was 76 to 162, averaging 97.

Nausea.—Vomiting was present in 25 cases, nausea only present in 10 cases, no nausea nor vomiting present in 2 cases.

Pain.—The pain began either as a sharp colicky pain about the umbilicus or as a dull ache in the epigastrium, becoming in a few hours either general (20 cases), or localized to the right iliac fossa (17 cases).

Tenderness.—This was present in every case and usually exquisite in character.

Rigidity.—This was noted on both sides in 22 cases, on right side only, in 15 cases.

Tympanites.—This was present in 14 cases, absent in 23 cases.

Tumor.—A well-defined mass was noted clinically in 18 cases, and a slight tumor in 3, in every case confirmed by operation. Sixteen cases failed to show the presence of a mass clinically; in 6 of these general purulent peritonitis existed with marked tympanites, and in 2 cases the abscess was in the pelvis.

OPERATIVE DETAILS.

Time of Operation.—23 cases were operated on on the day of admission, 12 cases on the day after admission, 1 on the fourth day after and 1 on the seventh day.

Anesthetic.—In all cases ether was used as the anesthetic and the time of operation varied from several minutes in two cases, where the abscess cavity was merely opened and drained, owing to the poor condition of the patient, to fifty minutes. The average time was from 25 to 30 minutes.

Incision.—The incision was made through the right rectus in cases where no tumor mass was determined and to the outer side of the tumor, when that was detected. The incision was always large enough to work with ease. Edema of abdominal walls was encountered six times.

Adhesions.—In 33 cases the appendix or the cecum were bound either together, to the abscess wall or to the right iliac fossa in a mass of adhesions. In two cases there were no adhesions.

Condition of the Belly Cavity.—In 11 cases there was a general purulent peritonitis, in 9 of which the appendix was perforated, necrotic and gangrenous and in which the small bowel was the subject of exudative peritonitis. In the others the appendix was highly inflamed, but with no perforation, and an abdomen full of sero-pus, evidently a migration of the infecting organism through the diseased wall of the appendix. In 11 cases there existed a large localized collection of pus in the right iliac fossa, well walled off in most instances by a thick exudate, tangled omentum, cecum and small bowel, and containing foul greenish pus. In these abscesses the appendix in 5 cases floated, necrosed from the cecum. In 4 cases the appendix was gangrenous, usually perforated. In 2 cases the appendix was not searched for—merely opening and draining the abscess. In all cases there was more or less necrosis of the cecum. Whether there was general infection was not determined at operation.

In 5 cases there not only existed a localized abscess in the right iliac fossa, but also a collection in the pelvis and with the appendix either on the brim or in the pelvis, and in an ulcerated and semi-gangrenous condition with a perforation in 3 cases. In 7 cases there existed a small collection of pus about the appendix in the right iliac fossa with a perforated appendix in 2 cases. The other cases showed a highly inflamed appendix with necrosis of the mucous membrane.

Three cases were free from abscess formation: Case 3, with a coincident carcinoma of the cecum; Case 14, with an acute interstitial appendicitis; and Case 34, with an acute catarrhal inflammation of appendix. These cases, with the cause of death, are discussed later.

Methods of Appendicectomy.—In 35 cases the appendix was removed either by ligation or by cutting it off at the cecum, except in the 5 cases with entire necrosis of the cecal end of the appendix. In these cases an attempt was made to close the cecum with Lembert sutures and in one a fecal fistula was encouraged owing to the extensive sloughing of the head of the cecum.

Drainage.—Thirty-three cases were drained, 17 by use of a glass tube into the pelvis and from one to eight pieces of iodoform gauze either in the coffer dam arrangement, or as wicks to drain the pelvis, abscess cavity or appendix stump. In some cases of general infection one or more pieces of gauze were placed across the abdomen. In 2 cases a loin incision was also made and rubber counter drainage introduced. Four cases were not drained. Cases 3, 14 and 34 were clean and were sewed up in tier suture, the first two with silk and Case 34 with catgut. Case 30 was one of general peritonitis, but there was no free pus, merely a lusterless peritoneum with a turbid, odorless sero-pus in the pelvis and the appendicitis was of but eight hours' duration. Eight of the cases of general peritonitis were freely irrigated.

DEATH AND CAUSES.

Time of Death.—Death took place on an average of 5.4 days after operation, excepting the last two cases, as follows: Within 24 hours 3 cases, on the second day 2, on the third day 10, on the fourth day 5, on the fifth day 2, on the sixth day 3, on the seventh day 1, on the eighth day 3, on the ninth day 2, on the tenth day 1, on the fourteenth day 1, on the sixteenth day 2, on the forty-first day 1, on the forty-third day 1.

When we review the clinical histories, the findings at the operating table and the results of a partial postmortem of the 37 deaths which have been analyzed in the preceding paragraphs we find four causes for the death of these patients.

Peritonitis.—First and foremost stands that dreadful disease, peritonitis, by far the most frequent complication of appendicitis. Thirty-two cases or 86 per cent. of these deaths were due to that infection; and as general purulent peritonitis, in our experience, is almost invariably fatal, these 11 cases were beyond surgical aid when admitted to the hospital. Three of these were of the fulminating type, were promptly recognized and sent in for operation within twenty-four hours of the onset, but not one was suffering from an initial attack—two, four and five previous onslaughts of appendicitis tells the story of the fatal ending of these cases. They had "recovered" from the early attacks. Of the other 8 cases, 4 were in the initial attack, but after the use of calomel, poultices and careful deliberation over the rise or fall of a leucocyte count, four and a half precious days on an average, had slipped away, never to return, and the patient comes to the hospital with a gangrenous and perforated appendix and with a beginning or a complete peritonitis.

The following case of general peritonitis is of interest. The autopsy report is typical of these cases:

CASE 8.—A man, aged 24, of poor physique, with indigestion and constipation. During eight months has had several attacks of pain over the appendix, sometimes severe and accompanied with nausea. Two days before admission he was seized with severe pain over the appendix, with nausea and

vomiting. On admission his temperature was slightly subnormal, pulse 108, abdomen as stiff as a board but not distended. Nothing could be determined by palpation. Rectal examination negative. Was very tender over entire abdomen.

Operation revealed a belly full of pus, with an appendix free and not perforated. Appendix removed and glass and gauze drainage introduced.

Patient died 38 hours after operation. Partial postmortem revealed the abdominal cavity full of pus, thick, yellowish and malodorous. Colon and bowel enormously distended and covered with a soft plastic exudate. No perforation of intestine or stomach. Wound in cecum intact. The appendix was 6.75 cm. long, 4 to 6 mm. in diameter, was red, inflamed and swollen. No perforation or concretions. Mucous membrane hemorrhagic in places and slightly ulcerated at tip. Bacteriologic examination of cultures made from abdominal cavity at operation revealed the colon bacillus in pure culture.

Having considered 11, there remain 21 more cases of peritonitis to be discussed. In 19 of these there existed a peri-appendicular abscess of large or small degree and either anterior, posterior or in the pelvis as regards location. Whether the infection of the peritoneum was general at the time of operation or whether the mechanical injury to which the peritoneum was subjected during operation, in the presence of infecting bacteria, was the cause of a resulting diffuse peritonitis, is a matter of conjecture. But at any rate 8 of these 19 cases, shortly after operation, developed the clinical picture of general peritonitis; the belly becoming more and more distended, enema ceasing to be of avail and eserin always proving useless. The bright eye, flushed face, clear mind, rapid, wiry pulse, and the ever-increasing vomiting of a blackish material, partly fecal and partly altered blood, all telling the tale of an, alas, too often recurring story. These patients died on the second to the fifth day, as a rule, and an autopsy would reveal a general purulent peritonitis with many adhesions at the site of operation.

The following case is of interest in this connection, because, while the most conservative treatment was adopted, the patient died.

CASE 10.—A man, 60 years old, without any previous diseases or cause, was suddenly seized with a typical attack of acute appendicitis, promptly developed an abscess and was admitted seven days after onset. He was anemic, temperature 100.4 and a large abscess in the right iliac fossa, exquisitely tender to palpation. Both recti rigid; 19,800 leucocytes.

A few whiffs of ether were given, an incision made into the abscess, its cavity wiped out and gauze drainage introduced. No attempt was made to locate the appendix. The patient died sixty hours after operation. A partial postmortem showed a general purulent peritonitis with gangrene of the appendix and caput coli.

There were six cases which did not develop general peritonitis, and while in these the peritoneum was able by some process, imperfectly understood, to form sufficient adhesions to prevent infection of the general abdomen, yet by reason of its great absorptive power sufficient ptomains and toxins were absorbed to overcome the resistance of the individual. In all of these cases the patients were not admitted until four to six days after the onset and were already septic when operated on.

After operation the temperature ran a septic course, there was a weak pulse, leaky skin, sometimes diarrhea and then hiccough, delirium, paresis of the bowel and a failing heart muscle presaged the end of the patient. Death took place from six to seven days after operation and the autopsies showed an extensive circumscribed purulent or sero-fibrinous peritonitis with damaged kidneys or diseased heart muscle.

The following illustrates this type, with an unusually long course:

CASE 24.—Female, aged 43. Several attacks before the present one. One week before admission was seized with the typical symptoms of appendicitis—pain, tenderness, rigidity and vomiting, with chills and vesical irritability. A mass could be determined on the right side.

Operation revealed a large posterior abscess and with an appendix sloughed off from a necrotic cecum. The abscess cavity was wiped out with gauze, the appendix removed and drainage introduced—glass and gauze into the pelvis, around and in the abscess cavity.

The patient recovered from shock and did nicely until six days after operation when on removing the gauze a fecal fistula began. The wound gradually healed by granulation and there was no untoward symptoms, except a septic temperature and the fistula for four weeks. The patient at this time was sitting up. Thirty-four days after operation she began to have a more decided sepsis, with chills and sweats. Vaginal examination revealed a doughy mass on the right side; but her condition forbade operation and 41 days after operation she died.

Postmortem revealed a localized adhesive peritonitis, a necrotic cecum with a fistula at the appendix site, a secondary abscess of thin brown pus in the median line among the small bowel and a large abscess in the pelvis with a thick wall and containing thick, greenish, malodorous pus. Sigmoid markedly congested.

The median abscess was evidently an infection from the fistula and the collection in the pelvis evidently existed in part at the time of operation and was not taken care of by the drainage.

Intestinal Obstruction.—Whenever many operations for relief of appendicitis are performed, especially in the presence of an abscess, intestinal obstruction must be feared. This condition, which usually does not occur for ten days or more after the primary operation, was met 6 times in this series. In one case the obstruction was not complete and was only discovered at autopsy as a partial obstruction from dense adhesions, the patient dying of sepsis six days after operation. In 4 cases a large peri-appendicular abscess existed with much exudate, and in one of these cases the obstruction did not develop until forty days after operation. The cases cited died from general peritonitis, about the third day after re-operation.

CASE 34.—The sixth was admitted on the second day of an attack of acute appendicitis. Operation revealed a highly inflamed appendix with adhesions to cecum and right iliac fossa. It was ligated and wound closed with catgut tier sutures. The patient developed an ether bronchitis and four days after operation, during a severe spell of coughing, the wound gave way and part of the small bowel was pushed out of the abdomen. Ether was given and the bowel further delivered and washed with saline and then replaced. Cecum was not examined. The wound was closed with through-and-through wormgut sutures with a small gauze drain at the lower end. Four days later symptoms of intestinal obstruction developed, the abdomen was promptly opened and at the ileocecal valve the ileum was found completely obstructed by a mass of adhesions from the free edge of the meso-appendix. These were relieved and the wound closed, using glass drainage and one piece of gauze. Patient died thirty-six hours later.

which lasted a few hours, subsided and remained as a dull ache over the right iliac fossa. Bowels became constipated; vomited at first. On day before admission the pain became more severe. On admission there is rigidity of both recti muscles with tenderness low down in the right iliac fossa; 14,200 leucocytes, 78 per cent. H.B. and 3,740,000 red cells.

Operation under ether revealed a carcinoma about the ileocecal junction, about the size of an orange, very hard and surrounded by dense adhesions. The appendix was tied up in this mass and was acutely inflamed. An ileo-colostomy was performed, using a Murphy button to perfect the anastomosis. The appendix was incised and some escaping pus was wiped away. Gauze drainage was disposed about the appendix and incision partly closed with wormgut. The patient developed general peritonitis and died three days after operation.

Partial postmortem revealed the abdominal cavity full of pus, with anastomosis leaking and ileum at the seat of carcinoma almost totally occluded.

This concludes the deaths from peritonitis, leaving five more to be considered.

Other Causes of Death.—Case 4 suddenly collapsed on the second day after operation from heart failure. Case 22, a man 77 years old with a small abscess about a highly inflamed appendix, died on the third day after operation from pulmonary edema. Cases 5 and 29 died of uremia six and eight days, respectively, after operation. Case 14 was of peculiar interest:

CASE 14.—Miss F., aged 29, always enjoyed good health until one year ago, when she was taken with scarlet fever with a complicating nephritis. Recovered, but has not been in perfect health since, suffering with backache, indigestion and constipation. Three weeks before admission she was seized with severe abdominal pain, most marked in the epigastrium and with nausea, vomiting and constipation. Twelve hours later her bowels were moved and the pain subsided, but has remained as a residual soreness on the right side. On admission there was slight rigidity of the right rectus and tenderness at McBurney's point, etc. Urine showed a trace of albumin only.

Operation revealed an acute interstitial appendicitis with no adhesions. Appendix removed and wound closed with silk tier sutures. Several bleeding points in the superficial fascia had been ligated with catgut.

Recovery was uneventful, stitches removed on the seventh day and on the ninth day patient allowed to sit up, but towards evening was feverish with temperature 101. Wound appeared in good condition.

On the tenth day she suddenly developed a phlebitis of the left femoral vein, temperature 103.2. Wound opened and a small stitch abscess evacuated. But towards evening she began to develop uremic symptoms, with suppression of urine. On the eleventh day the temperature was normal and remained so, but in spite of all efforts the kidneys were inactive and the patient died sixteen days after operation.

The six deaths in children present the following facts of value: All six had a general peritonitis at the time of operation. They were all operated on in the initial attack. The time elapsed between the time of operation and onset varied from two to twelve days. Five had abscesses, three in the pelvis, one post-cecal and one sub-hepatic. In five cases the appendix was perforated and gangrenous. The sixth case had no localized collection of pus, but a general infection of the

DEDUCTIONS FROM THE STATISTICS.—PROPRIETY OF
EARLY SURGICAL INTERFERENCE.

When we consider the awful array of pathologic conditions which appendicitis is capable of causing and that most, if not all, might have been avoided by the early institution of surgical measures, we believe we have sufficient grounds for presenting this paper.

For a disease which has been determined to be a purely surgical malady, we know of no other affection which is as infrequently placed under the direct charge of the surgeon until interference is imperative to save life, as is appendicitis. Why is this so? There are still too many skeptics who do not believe in the propriety of surgical interference prior to the formation of pus. We can not find any reasonable excuse for this state of affairs other than a want of practical knowledge of the living pathology of the affection in question. The time has come when it is the plain duty of all surgeons to insist upon the one sure and safe treatment of appendicitis, early operation. We know of no other surgical measure which is so reasonably sure of success after early operation and when prompt interference means as much to the patient as in acute appendicitis. When the laity cry for early operation it is high time that the medical men be equal to the occasion. Is it not a stigma to our profession to have the laity better versed as to the correct thing to do in this disease than are many of our profession?

By the institution of surgical interference following immediately the onset of the disease the convalescence is curtailed in the majority of instances and the complications and sequelæ prevented. When we compare this with the protracted and uncertain recovery, to say nothing of the complications and sequelæ, the risk to life from acute intestinal obstruction and the awful devastation of the ever-present pus and sepsis in late operations, there is no question as to the choice between the two.

We learn many things in surgery which, as time elapses and our experience ripens, we must forget so as to profit by the work done and seen. There was a time when we firmly believed that an ice bag was an imperative necessity in the treatment of acute appendicitis and that it was wise to wait until the subsidence of the attack, so as to remove the diseased appendix in the period of quiescence. The objection to the use of the ice bag in the treatment of acute appendicitis is like that of opium, but not to the same degree, however, namely, the false sense of security to which it may lead us by partially masking the symptoms; while in certain cases it may do good, still in others it may lose to the patient valuable hours in delay so that perforation may take place, formation of adhesions with or without pus, or the insidious invasion of the general peritoneal cavity follow the onset of the disease, even with the abdomen covered with ice bags. If it is true that by the prompt use of the knife, as our experience shows, our mortality rate is lowered; and further, that the complications and sequelæ are avoided, making more certain the limitations of empirical treatment, then the wisdom of early surgical interference, as opposed to the use of the ice bag and purgatives with the hope that temporary relief will be procured, is clearly defined.

We are satisfied that in years gone by many valuable lives have been sacrificed by waiting for an attack of appendicitis to subside in order to perform the operation of election between attacks. That terrible uncertainty which always exists in appendicitis no longer

should exist, for we are aware that if an attack is permitted to advance to the pus formation stage that we may have any or all of the complications and sequelæ. We are aware that some cases of appendicitis will temporarily improve, but if we follow these long enough there is an entirely different tale unfolded.

To the statement that an amelioration of symptoms in acute appendicitis should always be regarded as favorable and a contra-indication to operation, we take exception. The progressing pathologic process is so uncertain and so difficult, yes, impossible to decipher by the means we possess, exclusive of opening the abdomen, that we clinch this opportunity to operate and thus save lives that otherwise would be lost in waiting for convalescence and the interval stage, which too often does not arrive. We are sure that many will take exception to this, but nevertheless we are forced from our experience to decry such exceptions as false. Even though the symptoms apparently ameliorate, the pathologic process is too frequently hurrying on to the stage of pus formation. To follow this teaching is to practice the rule that proves the best in the majority of instances. To attempt to make ourselves familiar with the pathologic freaks which this disease is capable of displaying is to study the process in the living belly cavity, not in hundreds, but in thousands, and to do this one must be ever present at the side of the operating table; and he who doubts our position we invite to witness our operations at the German Hospital, where we know we can make him a convert to our teaching and practice.

The oft-repeated, old, old story of procrastination is nowhere better illustrated than in connection with the delay in waiting for the interval operation. There is a temporary improvement under the application of the ice bag and administration of laxatives, which, however, should not mislead anyone, as it often is immediately followed by an exacerbation of the symptoms of the disease, indicating a perforation of the appendix, or the formation of pus or its dissemination. Even while the apparent lull in the appendiceal storm is on, grave complications are making headway in the abdomen, out of sight and out of reach of the examining finger. We all of us know that the temperature and pulse rate are of no diagnostic value in many instances and that the dangerous constitutional evidences of the disease are not made manifest until the irreparable damage has been done and too often a dear and valuable life sacrificed.

The appearance of shock or collapse early or at the time of onset of a secondary attack means but one thing, perforation of the appendix has taken place. We are convinced that all the fulminating cases of appendicitis are such because they almost always occur in a secondary attack of the disease. How often has it been the experience of a surgeon to hear the statement made that the collapse came as a thunder-bolt out of a clear sky, and after a careful inquiry into the previous history of the case, find that the patient has been the subject of many premonitory symptoms of appendiceal irritation with the culmination of this disastrous state of affairs.

It is on account of the many, many accidents complicating the disease during an attack and because so many fatalities attend subsequent attacks that we have determined to disprove of the interval operation and come out flat-footed against delay in the primary attack.

Acute intestinal obstruction following delayed operation in acute appendiceal disease has occurred most frequently in our experience in the right iliac fossa and made its appearance after ten days or two weeks

had elapsed and in a most insidious way. While recognized promptly and an operation instituted for its relief directly after its recognition, the results have not been at all reassuring. It has been our practice where obstruction is suspected to open the abdomen on the appearance of paroxysmal pain with nausea or vomiting and inability to move the bowels or pass flatus.

A glance at the table of statistics shows that the mortality of the operation for the relief of obstruction is 60 per cent. Now, our friends who decry early operation can not say that this sequel to the delayed operation for appendicitis is a point in favor of delay. It is a fearful commentary on the obstinacy of some, who, in defiance of the many discussions which this disease has undergone and the gradual conversion of many to the conclusion that there is something in the surgical treatment of appendicitis after all. These same fanatics continue to raise a hue and cry, both by voice and in print, against the too frequent use and abuse of the knife. There is no doubt in our minds that had early surgical interference been instituted in the cases which subsequently had obstruction, before the adhesions formed, they would still have been alive and well.

SECONDARY ABSCESESSES.

Secondary abscesses, a result of acute appendicitis, occur frequently enough to warrant a few passing remarks on their origin, significance and their prevention. The convalescence of an appendix case complicated by abscess is in many instances uncomplicated, but unfortunately in others a secondary collection forms which may seriously jeopardize the patient's recovery or prolong the convalescence to such an extent that an undermining of the constitution results, which leaves the sufferer an invalid for a long period of time and in some instances is followed by a neurasthenic state from which they never entirely recover, or, as instanced in this paper, result in death from a collection at a point far distant within the peritoneal cavity.

The evacuation of the primary focus of infection does not necessarily mean the removal of pus from a secondary abscess. A secondary collection is often exposed upon breaking up the adhesions which help to form the wall of an abscess cavity, and it is our practice to do this in certain cases, not only in the hope of finding a secondary collection, but to avoid contraction of the abscess wall and in this wise prevent an intestinal obstruction. It has been a safe practice in the author's hands to break up the adhesions forming a portion of the abscess wall, provided that the proper use of gauze has been made to safeguard the general peritoneal cavity.

FECAL FISTULÆ.

Fecal fistula, a distressing and preventable sequel to appendicitis, occurs always as a result of progressive and destructive inflammatory action consequent upon a late operation for the disease, and is due to one or two causes, a softening of the surrounding bowel wall from micro-organismal invasion, or to the subsequent breaking down of the bowel from interference with its nutrition, also due to the acute inflammatory disease. A fatal termination occurs in a certain percentage of non-operated fecal fistulæ. The involvement of both the large and small bowel in a fecal fistula leaves the patient in a very precarious and dangerous condition, owing to the interference with the nutrition and the escape of the very elements of nutrition through the fistula.

Any operation for the repair of a fecal fistula, no matter when performed, is attended by danger and risk to life. There are a few instances where the fecal fistula closes spontaneously. Our experience with fecal fistulæ closing spontaneously has not been so happy as many of our colleagues, judging from their reported cases. We have occasion to repair many cases of fistulæ, not only in our own patients but those of others, where as long a time as one year has elapsed without spontaneous healing having taken place. In a percentage of these cases the lesion has been more than a fistula, an artificial anus. It is not our practice to interfere in the case of a fistula, unless it be of the small bowel and attended by the escape of the essential nutrient material, until a considerable time has elapsed and healing not taken place.

COMPLICATIONS.

The complicated cases of appendicitis present so many phenomena that the merest mention only of the more prominent can be made, owing to the limited time permitted to the subject. Among the more common complications are: General peritonitis, involvement of the omentum with abscess, abscess of the mesentery, and inflammation of the lymphatics of the mesentery glands followed by abscess, abscess between the coils of small bowel, pyemia of the portal system the result of phlebitis of the veins of the meso-appendix, with or without metastatic liver abscess, gangrene of the cecum, colon and small bowel, abscess of the liver from contiguity of structure, septic nephritis, septic meningitis and phlebitis of the lower extremity, particularly the left, but sometimes both.

Phlebitis as a complication of appendicitis never occurs except as a result of infection; when phlebitis is a sequel to chronic appendicitis operations there will be found some point of oversight in the technic that accounts for the infection. Phlebitis may be a serious complication and may cost the patient not only their future usefulness, but may also have a fatal termination, as instanced by embolic obstruction.

OTHER SEQUELÆ.

The three sequelæ of acute appendicitis most commonly met are fecal fistula, hernia and intestinal obstruction.

Hernia as a sequel to acute suppurative appendicitis in our judgment always follows the extensive use of drainage and, we are almost prepared to say, in all instances where drainage is used. Like fecal fistula, it is preventable and the operation for the repair of the defect in the abdominal incision is attended by a much greater risk than is the primary operation, if done at the opportune time. A successful result is not always obtained for several reasons: first, because the tissues are so thinned out that any attempt at repair is followed by a recurrence of the hernia and, second, the possibility of an infection of the wound or of the peritoneal cavity, thereby causing the patient to assume the risk of peritonitis twice where it should not have been a possibility in the first instance.

The painful dressings occasioned by the removal of the protective gauze packing and drainage and its reinsertion in suppurative cases play an important rôle in the convalescence; not only does it cause the patient great pain and anxiety, but it may be a possible source of contamination to the peritoneal cavity, if through any mischance in the effort to repack the wound protecting adhesions are broken through. We believe that these dressings are, in a percentage of cases, the cause of an undermining of the nervous system.

APPENDICECTOMY.

The appendix should be removed in all cases where operation is done early. In late cases whether the appendix should be removed must depend upon the skill and experience of the operator, the local condition and the condition of the patient. We have in a few instances, as will be noted in the foregoing pages, refrained from removing the appendix, contenting ourselves with simple evacuation of the abscess. The patient's condition was so shockingly bad that we did not consider it wise to do more than evacuate the abscess. A patient whose condition is so bad that operation on the abscess cavity is alone warranted is not in any way promising. The mere evacuation of an appendiceal abscess without the removal of the appendix does not cure appendicitis, and any surgeon who so informs his patient practices a deception; while it may possibly be done without the intent to deceive, it is a fact nevertheless. Occasionally the operator is led to believe that the appendix has sloughed off because a mass of lymph floats out of an abscess cavity. We have, on more than one occasion in the distant past, been led to suppose that this was so, but a riper experience has taught us differently. A careful survey of the abscess wall under these circumstances has found the appendix imbedded in lymph, although completely severed from the cecum. When in the evacuation of an appendiceal abscess a mass of lymph shaped like the appendix is seen in the abscess or to float out with the pus, it must not be supposed that this is the appendix. We admit that this may look not unlike the appendix, yet a careful examination to settle the question is in order. To entertain the thought that the evacuation of the appendiceal abscess spontaneously by way of the bowel, pelvis or the ureter, bladder, through a bronchus or any other internal avenue, or externally, even by the knife, is a safeguard against subsequent attacks of the disease is not borne out by the experience of those of us who operate upon cases presenting such a history or who operate for the cure of hernia or a fistula following these evacuations. Under these circumstances we have operated many times, and have yet to find the appendix absent. Some of the largest appendices we have removed have been in cases of this character.

LEUCOCYTOSIS.

A word about the white blood count in acute appendicitis. In our experience a leucocytosis is present in the majority of cases. That it is of any particular moment in only the doubtful cases we are convinced. In any but doubtful cases, and these are few, for the diagnosis of this ailment, particularly if seen early, is not a hard one to make. To defer operation for any length of time until a blood count is made is to expose the patient to a risk not justifiable and places the medical attendant, be he physician or surgeon, in a position which makes him censurable. To take out an healthy appendix, if there is such a thing in a believed case of acute appendicitis, is much less a crime than to jeopardize a patient's life by deferring operation in a bona fide case until a leucocytosis is present. A leucocytosis in gangrenous appendicitis is not often present, owing to the lowered resistance of the patient; therefore if depended upon under these circumstances what may be the patient's only chance to get well, operation, has been deprived him.

Leucocytosis in late cases, where that often referred to and by many hoped for condition, walled off abscess, is present, is frequently absent. Microscopic doctors are

of value if confined to the laboratories, but in the sick room they are useless.

CONCLUSIONS.

In concluding this abstract we will summarize the lessons learned from the preceding facts. Early operation means cure. There is no doubt as to obtaining a good result if the case be operated on while it is still one of appendiceal colic and not deferred until acute inflammation of the appendix has supervened. Deferred operation means protracted convalescence and invalidism or death. It is better to take out an occasional healthy appendix than to leave one that may cost a life.

APPENDICITIS.

A BRIEF REPORT OF THE AUTHOR'S NINE FATAL CASES, WITH COMMENTS.*

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THE CASES BRIEFLY NARRATED.

CASE 1.—Mr. L. July, 1891. Age over 60. Perforated appendix; incomplete adhesions; slowly progressive, general peritonitis; general sepsis; typhoid condition at time of operation.

Operation.—Tenth day. Lateral incision; appendicectomy; general peritoneal irrigation; iodoform gauze, packing and drainage.

Peritonitis and sepsis progressed and patient died a few days after the operation.

CASE 2.—V. L. October, 1895. Age over 60. Fulminating gangrenous appendicitis; no adhesions; general acute peritonitis and peritoneal sepsis.

Operation.—At thirty-sixth hour. Free incision; appendicectomy; irrigation; iodoform gauze packing and drainage.

Continued sepsis. Death thirty-six hours after operation.

CASE 3.—W. S. Age 6 years. Fulminating type, gangrenous appendicitis, with perforation; very large concretions; no adhesions; acute general peritonitis; peritoneal sepsis.

Operation.—At twenty-fourth hour. Free incision; appendicectomy; irrigation; gauze packing and drainage.

Death within thirty hours.

CASE 4.—Mr. C. August, 1898. Age 20 years. Fulminating type of acute gangrenous appendicitis with large cast-like concretions; general peritoneal sepsis.

Operation.—Thirtieth hour. Free incision; appendicectomy; peroxid irrigation; dry sponging; gauze drainage.

Death within twenty-four hours.

CASE 5.—L. E. B., Feb. 4, 1899. Age 11 years. Acute perforating appendicitis; abscess behind cecum and free pus in abdominal cavity; extensive progressing peritonitis. Patient was brought to the hospital from a distance of seven miles sitting in a buggy.

Operation.—Fifth day. Free incision; irrigation; hydrogen peroxid; gauze packing.

Peritonitis and sepsis continued to progress. Death on the fourteenth day.

CASE 6.—J. G. May 24, 1899. Age 37 years. Gangrenous appendicitis; gangrene cecum; perforation without adhesions; general suppurative peritonitis. Patient brought to hospital on fifth day, the appendix having ruptured before his admission.

Operation.—Free incision; appendicectomy; peroxid irrigation; dry sponging; gauze drainage. Abdomen was found filled with foul-smelling pus.

General peritonitis and sepsis. Patient died within thirty hours.

CASE 7.—Wm. M., Jan. 30, 1900. Age 37 years. Gangrenous appendicitis; general suppurative peritonitis; peritoneal sepsis. Patient was admitted to hospital on the third day of attack.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Surgery and Anatomy and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.

Operation.—Third day. Free incision; gangrenous appendix removed; peroxid irrigation; gauze drainage.

Sepsis continued. Death within thirty hours.

CASE 8.—Mr. C. October, 1900. Age 26 years. Acute suppurative appendicitis; perforation on the third day without adhesion; general suppurative appendicitis.

Operation.—Some hours after perforation; free incision; appendicectomy; peroxid irrigation; dry sponging; gauze packing.

Peritonitis and sepsis continued. Patient died on the second day after operation.

CASE 9.—Miss D., Oct. 25, 1901. Age 14 years. Acute suppurative appendicitis; localized peritonitis; perforation into adhesions. Patient was not seen until late.

Operation.—On the sixth day. Free incision; evacuation of abscess; peroxid disinfection; gauze drainage.

At time of operation the patient was in a very weak condition. A rather prolonged search through the adhesion for the appendix did not disclose it and as it seemed wise to terminate the operation on account of the patient's condition, the appendix was not removed, but the abscess drained. Patient apparently did well for about ten days; the temperature became practically normal, the wound was rapidly healing, and the author turned the case over to the family physician for final treatment, when the patient went into sudden collapse with symptoms of perforation and died within a few hours.

COMMENTS ON THE CASES.

By reviewing the above cases it will be seen that five of them, namely, Nos. 2, 3, 4, 6 and 7, were of the type of acute gangrenous appendicitis, rupturing into the peritoneal cavity without adhesions. Three of the cases, namely, 1, 5 and 8, were of the type of perforating, suppurative appendicitis without adhesion or with incomplete adhesions in which there was free pus in the peritoneal cavity, with acute general peritonitis, or with progressive suppurative peritonitis. In only one case, namely No. 9, was there a circumscribed abscess. In fact, this latter case is the only one in which a fatal termination was not expected and predicted.

On carefully inquiring into the histories of these cases it was found that nearly all of them had had previous attacks from which they had apparently recovered, or that they had had symptoms to which they had paid but slight attention, but which would easily have been recognized by a skilled diagnostician; and had they been operated on at one of their earlier attacks, or at any time previous to the final breakdown of the appendix, it is fair to assume that they would have recovered.

IMPORTANCE OF EARLY OPERATION.

It is a conviction of the author that death from appendicitis is due to but one thing; that is, too late an operation. In every case of fatal appendicitis there has been a period when the patient could have been operated on successfully and safely.

One of the points which the author wishes to make is that appendicitis is purely a surgical disease and that it can only be treated properly by surgical intervention. Time would not permit, nor would it be fitting here, to set forth arguments in support of this statement, but it is a statement which can be fully sustained by sound reason and by good practice.

Some years ago the author set forth his views concerning the proper method of treating appendicitis, and with very little alteration that method serves him today. It embraces, first, the palliative treatment; second, rules for operating on an interval case; third, rules for operating on an acute case with circumscribed peritonitis with or without abscess; and fourth, rules for operating on an acute case with general peritonitis.

PALLIATIVE TREATMENT.

According to present knowledge palliative treatment is properly applicable to a very limited number of cases, namely, only those in which there is some strong contra-indications to operation, or in those cases in which an experienced surgeon will feel comparatively sure that the patient is proceeding to prompt recovery and in which he may look forward to safe postponement of the operation to the time of the interval. The treatment is very simple and is as follows:

Put the patient in bed and keep him there.

Apply over the whole of the right iliac region a soap "poultice," consisting of green soap spread on a single layer of muslin or linen.

Over this apply a broad ice bag or an ice coil.

Relieve the bowels daily by soap and water enemata.

Keep the stomach at rest while vomiting exists.

Restrict the patient to milk, if he can take it; if not, give him clear broth, never solid food.

Note the temperature, pulse and respiration every four hours.

Have all preparations made for an immediate operation.

Remember that your treatment is purely expectant.

Give no drugs.

Never give opium or morphin in cases of appendicitis except in case of abdominal shock from rupture of appendix or of abscess.

OPERATIVE TREATMENT.

There are certain general rules that the author applies to all forms of operations. These will be touched on at once, and then will be taken up the special indications and procedures.

He insists on having one of his own assistants when possible, considering that the protection of the peritoneum by gauze packing and the retraction of the wound are of the utmost importance. It is also important to have a nurse who is thoroughly familiar with the operative methods. The entire abdominal surface should be sterilized as completely as possible. There should be prepared a proper operating table. The Trendelenburg posture should not be employed. Hand sponges and flat laparotomy sponges should be made of sterilized gauze arranged in packs of ten and carefully counted and recounted after the operation. For catching and removing pus on opening an abscess small marine sponges are used on holders. The patient should be slowly and carefully anesthetized. When thoroughly narcotized and the muscles relaxed, a final examination should be made. The operation should be done deliberately and carefully, but with all compatible speed.

We now come to rules for the special form of operation.

(a) *Rules for Relapsing and Recurrent Appendicitis—Interval Operation.*—After the patient has been thoroughly anesthetized, the skin properly prepared, the operation field thoroughly surrounded and protected by sterilized coverings, the operation is done as follows:

An incision is made external to the border of the rectus, parallel to the fibers of the external oblique. Its middle point should be on a line drawn from the umbilicus to the anterior superior spine of the ilium. The external oblique fibers should be separated without cutting and the internal oblique may be opened by cutting or splitting, according to the preference of the operator. The transversalis is opened in the same

manner. When the peritoneum is reached it should be lifted between two mouse-toothed forceps and divided, such care being taken as to positively insure against wounding the intestine, whether there be any adhesion or not. Of course, before opening the peritoneum all bleeding should be arrested.

When the peritoneum has been sufficiently opened the index finger is introduced and the region of the appendix explored. If adhesions are found, the entire wound should at once be enlarged so that the necessary separating and dissection may be done with facility and in plain view.

If there are no adhesions the wound may be a very short one in a very thin subject, not exceeding one inch in length, but it always should be large enough to enable the operator to do his work properly. When the appendix is found, if it is free from adhesion, its tip should be brought out of the wound and the mesentery should be divided between fine catgut ligatures. When the appendix is separated from the intestine, except at its base, it and a portion of the intestine should be brought out of the wound, so that the ablation can be done extraperitoneally. The author passes the appendix through a hole in the center of a flat gauze sponge, which gives excellent protection to the peritoneum.

The author passes a Lembert suture at each side of the base of the appendix and one at its middle, leaving the loop long; the first two are used as retractors holding up the intestine. The appendix is now cut off about half an inch from its base. Its canal is probed to be sure that it is pervious, then with a fine forceps the stump of the appendix is invaginated and the middle Lembert suture is tied as the forceps are removed; then the other two sutures are tied and the orifice is thus completely closed by Lembert sutures. The immediate region is disinfected with a drop of peroxid of hydrogen, the intestine is returned to the abdomen, the abdominal wall is closed with one through-and-through suture of catgut if the incision was short, more being used if necessary. A collodion dressing is applied. This operation is done as an aseptic procedure. It will require from 15 to 25 minutes to perform.

The after-treatment is very simple, consisting of rest in bed for one week, fluid diet for four days, enemata daily. The patient should be fully restored to health and his usual occupation anywhere from the eighth to the fourteenth day.

(b) *Operation for Acute, Suppurative or Gangrenous Appendicitis with Localized Peritonitis, with or without Abscess.*—After the preparation of the patient and operation field above described, a similar incision is made, but it must be extended at either end and should be at least four inches in length. The external oblique is opened by blunt dissection; the rest of the layers should be clean cut, and care should be taken not to separate one layer of the wall from another. If the aponeurosis and fascia are stripped bare they are very apt to slough, and thus leave a very weak wall.

The essential part of this operation consists of the intraperitoneal work in searching for and treating the abscess, if one exist, and in searching for and dealing with the appendix. The most important thing of all is the protection of the uninvaded peritoneum. This requires the exercise of sound judgment to determine how much to do, and of knowledge and skill to do it properly.

As soon as the peritoneum is opened sponge packing should be begun. Throughout the operation this must

be done in such a manner that no infected tissue nor disease product can come in contact with healthy peritoneum. The first assistant must take entire charge of this.

When all the open spaces around the mass of adhesions have been completely closed by dry gauze pads, the wound should be well retracted and the tumor gently entered by separating adhesions and by blunt dissection. When an abscess is reached the author makes a pin-hole opening, and at once prevents the escape of pus by pressure of a small sponge held in an artery clamp. After a minute the sponge is replaced by a clean one and the pus is removed drop by drop, all of it being absorbed by these sponges and none of it allowed to escape into the wound. After pressure is sufficiently reduced by emptying the abscess the opening is gradually enlarged, and finally the cavity can be thoroughly sponged out. Now it should be freely opened and its interior disinfected with hydrogen peroxid. The size of the abscess will depend on the duration of the disease. Its walls are composed of adherent intestines thickly coated with plastic lymph, and the ruptured or perforated appendix usually forms some part of this wall.

We have now reached the point when the average of the results will depend on the judgment of the operator. If he is wise he will remove the appendix in only those cases in which it can be readily found and removed without separating too many adhesions. If he is rash, he will unduly persist in his manipulations, and in many cases he will break through Nature's safeguard at some point unseen and cause the death of his patient by secondary infection.

If the appendix can with safety be removed, it should be separated from the intestine with great care and gentleness, its mesentery properly ligated; then it should be ablated about a quarter of an inch from its base, and the canal thoroughly sterilized with the cautery. Now a single ligature of catgut should be tied around the appendix, including all its coats, then the superfluous stump beyond this ligature trimmed away with the cautery or scissors. Now the operator should thoroughly resterilize his hands, and all towels, etc., about the wound should be replaced by clean ones.

One or two sutures may be used at each end of the wound, but an ample opening must be left, for the wound must be treated by packing. Remember that in packing a wound for drainage you must not proceed as you would if you were calking a ship to prevent leakage. These wounds, whether the appendix has been removed or not, should be packed as follows: One piece of iodoform gauze, folded longitudinally, is passed to the bottom of the abscess cavity and brought out of the wound, and turned to the outer side of the wound. It should be large enough to completely fill the cavity, but not to stuff it. Now, as the first assistant slowly removes his gauze pads they should be replaced by pads of iodoform gauze which must be carefully protected from any contamination. These pads must completely close any spaces where adhesions are wanting, and they must come in contact with healthy peritoneum and separate it from all infected areas. Careful note must be kept of the number of pieces used.

Now the entire wound should be covered by first a pad of iodoform and then by several pads of plain, sterilized gauze; flat ones are the best. These should be firmly held by strips of adhesive plaster. Over this a thick layer of absorbent cotton is placed and secured by an abdominal binder.

In case the operation is done before the appendix has broken down, and there is no circum-appendicular abscess, the procedure should be the same as the one just described; but the appendix can be removed in nearly all instances.

The after-treatment of these cases is most important. It should be as follows: Complete rest of the stomach for twelve hours. Peptonized milk in small quantity after twelve hours, if there is no nausea or vomiting. Patient should be kept quiet on his back for four days. Enema of soap and water every day; if there is much tympanites, turpentine should be added.

The outside dressing should be removed at the end of twenty-four hours, and changed as often after that as it becomes saturated. The packing should not be removed until the fifth day—that is, on the fourth day after operation. This needs to be done as carefully as the operation itself. Retractors should be used and the wound well opened. Then the gauze should be removed from the tumor cavity. This should be thoroughly cleaned by dry sponging. No fluids should be used. Now this cavity should be carefully repacked, and then the protecting pads should be gently separated from the adhesions they have caused and new pieces substituted.

After this the wound should be dressed every third day. Soon a single packing will be sufficient, and this should be reduced in size at each dressing. The patient should be kept on fluid diet for one or two weeks, and be kept in bed until the wound is healed to a narrow sinus, which it will be in from three to five weeks. When the patient gets up he should wear an elastic binder for one year to prevent hernia.

No drug treatment will be needed. The author insists on his rule concerning morphin. These patients will be comfortable and free from pain if they have not been reinfected at the operation, unless the case were already one of progressing peritonitis.

(c) *Operation for Fulminating Appendicitis, with Rupture or Perforation of Appendix, with General Peritoneal Involvement.*—This operation must accomplish removal of the appendix and of all infective material and the cleansing toilet of the entire peritoneum. When the diagnosis of this condition is positive, a large median incision should be made. The right iliac region should first receive attention. If the appendix is still attached, it should be removed and the stump secured. If the appendix has sloughed off, the intestinal orifice must be closed. With one hand in the abdomen, a separate opening in this region should be made for special drainage.

Now every portion of the visceral and parietal peritoneum must be cleansed by thorough sponging, which shall remove all inflammatory products and all foreign material. After this is done, every portion of the peritoneal surface must be washed again and again with hot salt solution (6 to 1,000). If the patient's strength will permit it, the intestines should be systematically, coil by coil, washed outside of the abdomen. The work should be done thoroughly; but it must be done rapidly, for these patients are always in a bad condition. Often you will be obliged to be incomplete in your work to avoid death on the table.

After the cleansing is accomplished, gauze packing should be used so as to drain the entire abdominal cavity. Enough suturing should be done to prevent escape of the intestines into the dressings. A very large dressing must be applied externally; this should be changed in a few hours.

In these cases opium is called for to relieve the pain and as a stimulant against shock. A full dose should be given before operation.

The foregoing rules for operation were adopted by the author years ago, and he has had no reason to modify them materially. While he now removes the appendix in nearly every case, he still feels that there are cases in which it is safer to resist from such attempt than to persist.

In support of the reasons which have led the author to continue to put in practice the principles here set forth, is the fact that in thirteen years of operative work in this field, while he has lost nine patients, but one of those has been of a type of disease which is considered amenable to treatment.

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ANOMALIES OF APPENDICITIS.*

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Although the question of diagnosis of appendicitis is treated as an easy matter by the majority of writers, it still remains of extreme difficulty, owing to the varying data of a given case. Appendicitis is not a self-limited disease, presenting a typical course; it is an anomalous disease.

The following points, gathered by the writer from notes in his own work, point to the extreme care which a case may demand in its diagnosis and subsequent management.

LOCATION OF APPENDIX.

The appendix is not always located in the right iliac region. Twice it was found adherent to the liver; once to the gall-bladder; twice to the urinary bladder. In very stout patients a certain degree of enteroptosis is present and changes materially the location of the appendix. One may then expect to find it in any part of the abdominal cavity, according to the particular location in which the ileocecal region accommodates itself. Under these circumstances the location of pain becomes a very obscure matter. It may be found at any portion of the abdomen, radiating in various directions. Again, the location of pain is the result of educated sense; hence, the accuracy with which it is located about the tongue, fingers and surface of the body, generally. Not so, however, with the parietal peritoneum, which, untrained to sensation, is not prepared to refer pain to the exact spot of irritation. These two elements join to make pain and its location an uncertain factor in the absolute diagnosis of appendicitis.

VARIETIES OF MICRO-ORGANISMS.

It is generally conceded that infection is the cause of appendicitis. Sometimes this infection is secondary to the irritating presence of a foreign body. But the infection itself is not uniform and presents numerous anomalies which depart from a typical infection. The multitudinous and varying clinical aspects of cases arouse in us the search for a cause to account for each clinical picture. In vain do we search for such a cause. We know that a foreign body or enterolith alone and sterile would become encapsulated and produce no inflammatory result. Infection is, therefore, the true cause.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Surgery and Anatomy, and approved for publication by the Executive Committee: Drs. H. O. Walker, A. J. Ochsner and DeForest Willard.

Bacteriologic examination reveals but three or four organisms—the bacillus coli, the staphylococcus, the lanceolatus, the streptococcus, and still the wonderful variety of lesions found about the appendix throughout its histologic structure, as well as the uncertain clinical appearances of the affection, would demand many more contributing etiologic causes. It behooves us, therefore, to examine into the bacteriologic element in the course of an attack of appendicitis. When Pasteur discovered the cause of anthrax and found that the *bacillus anthracis* caused death in animals whose temperature ranged from 98° to 100°, he also discovered that this same organism, when cultivated at 103 F., had lost so much of its virulence as now to serve as a vaccine for the cure of animals afflicted with the growth of this germ at their normal temperature. In other words, he established the fact that, organisms vary constantly in their virulence, and can be made to rise and fall in their irritating and poisonous effect, according to the nature of their surroundings.

Temperature, light, moisture, the nature of the soil and especially the degree of restricted space and soil to which their growth is limited: these principles are the ones from which we should seek the explanation of the various features of appendicitis.

THE VARIATIONS IN SYMPTOMS DUE TO DIFFERENT MICRO-ORGANISMS.

We will consider: 1, The varying virulence of the bacteria and their toxins during the course of an attack; 2, the reaction of these on the tissues, producing the histologic changes that extend from the fulminating gangrenous form, which is expressive of the most violent and acute inflammation, to the so-called appendicitis obliterans, expressive of the mildest type of irritation and producing a chronic inflammation.

Like the colon, the appendix has a serous, a muscular coat consisting of transverse and longitudinal fibers, and a mucous membrane, which has tubular glands and lymphoid tissue. At its opening into the cecum is a fold of mucous membrane—the Gerlach valve. The movements of the appendix are partly restricted by its meso-appendix, which does not always extend to its tip, and as a result may cause the appendix to curl upon itself during its vermicular movements. The histology of the appendix shows that, like all functionless organs, leading a retrograding existence, its self-protecting properties from circulation and phagocytosis are also restricted. With these premises we assume:

1. That all the bacteria found in the diseased appendix are also found in the healthy appendix and colon.

2. That a higher degree of virulence is the only cause whereby these organisms now irritate.

What, therefore, are the causes of the increased virulence of the bacillus coli and streptococcus? We know that an acute diarrhea or enteritis gives symptoms quite comparable to appendicitis, only more widespread. The bowel soon rids itself of the irritating fluid material, germs and all. But in the appendix drainage may not be possible, and from that time trouble begins. The micro-organisms which irritate the appendix as they do the gut, produce a swelling of the mucous membrane of the appendix, which tends toward occluding its lumen at any spot along its course, but more especially at its base, where is located the fold of mucous membrane known as the valve of Gerlach. It is then that the retained germs, growing in a limited area, rise in virulence, gradually, and at times produce a toxin so violent as to cause the same destructive changes on the substance of the appendix as would be produced

by so much nitric or sulphuric acid, causing gangrene of the organ in mass. The streptococcus is chiefly responsible for this type. We know that if it is confined in its development, gangrene of the foulest type results, as took place in pre-antiseptic days when pus often remained several days in a wound, producing hospital gangrene, now so seldom seen, owing to antiseptics and drainage. We all know the rapid and violent clinical course of this type and parenchymatous gangrene of the accompanying appendix, pain and rigidity of the right iliac region (sometimes of the whole abdomen), high temperature and a rapid bounding pulse.

When the bacillus coli infects, the case starts with quieter symptoms; there is generally a retention of fecal matter, and on the absorption of most of the liquid portion a fecal concretion or enterolith results, glued with mucus, and containing many exfoliated epithelial cells of the diseased mucous membrane of the appendix. In every case where the writer has found a fecal concretion the case presented also a history of one or more previous attacks of similar nature as the present one. In other words, hard fecal concretions are the result of a long-continued retention of feces in the appendix, antedating the present attack. Here, according to the virulence of the toxin generated by the organisms, within and around the fecal concretion, will the case result in a local gangrene surrounding the area of the concretion, or else the toxins being of a milder character, simply keep up chronic irritation of the appendix, resulting in adhesions of the appendix in various positions, and also excite a perityphlitis causing adhesions of the colon to neighboring structures. It is this type that results in the so-called obliterating form of appendicitis, which simply means that the irritation, constant but never very violent, has succeeded in destroying the mucous coat at the bottom of the appendix, caused granulations to form and an adhesion of the sides from the bottom up takes place by granulation, exactly after the cicatrizing manner of a wound which we force to heal from the bottom by packing. In this instance extra-appendiceal abscesses may also occur, either at the base bounded by the ileum, colon and omentum, or even at a distance in various positions of the abdomen. Here comes a most important complication which so often veils the clinical signs to be expected from such an infection as has just been described, that is, the presence of a mixed infection. The streptococcus may suddenly appear and give to the chronic type an acute exacerbation. The temperature, heretofore ranging between normal and 100° F., may take a much higher course with a corresponding modification of the pulse. The saprogenic germs may by their toxins further cloud the course of the original infection.

THE ABORTIVE TREATMENT FOR APPENDICITIS.

When chronic adhesions have existed and the spot then becomes one of least resistance, it also becomes a favorite soil for the development of the tubercle bacillus, hence the type of chronic abscess, much like the ordinary cold abscess which may be found in connection with a diseased appendix. Sometimes the appendix has entirely disappeared or disintegrated in the tuberculous process, and nothing but the so-called pyogenic membrane, tough and unyielding, is present, the colon and ileum in that region being also masked by it. Finally, cases may present a combination of these various types to such a degree that it is perfectly safe to state the following as an axiom: At no time during any attack of appendicitis is any one sure of the extent

perforative appendicitis the fourth day after the attack began. He had received on the day he entered the hospital, every hour, half an ounce of salts, which was the cause of his death. No operation was performed, as he was dying when admitted.

CASE 6.—This case might possibly have been saved by an operation. He was a very emaciated sickly child, 8 years old, suffering from perforative appendicitis for one week before entering the hospital. He had a mild form of diffuse peritonitis, and if his abdomen had been drained at once he might possibly have been saved. His condition was so low when he was admitted that it seemed to me he would have a better chance without than with an operation, but it is possible that my judgment was wrong in this case.

CASE 7.—A child, aged 4, was in a dying condition when admitted. No operation was performed.

CASE 8.—A child, aged 4, had received food and cathartics the day before coming to the hospital. It seemed to me when he entered the hospital that he was still on the safe side. I consequently operated at once. I thought an operation would relieve him, but he died from diffuse peritonitis. This case might have been saved by waiting.

CASE 9.—This case was one of diffuse peritonitis at the age of 44. He came to the hospital at the end of an acute attack, suffering from a circumscribed abscess. I made an incision at once and did an extensive operation, loosening many adhesions. He died of exhaustion after two weeks. I believe he would have lived if I had simply drained the abscess and had not removed the appendix from its deep location. The operation was too extensive in his weakened condition.

CASE 10.—This case was one of extensive diffuse peritonitis in a woman 32 years of age, who entered the hospital on the fourth day of her attack extremely ill. She was placed on exclusive rectal feeding. Gastric lavage was performed. She improved so that she could take liquids after three weeks. At the end of the fourth week I operated, removing a perforated appendix in a circumscribed abscess. All the intra-abdominal organs were diffusely adherent, so far as I could explore. Death resulted from pneumonia on the seventh day after the operation. The abdominal wound was normal.

Of these cases I believe the 2 that died in the interval should have lived. I think 2 cases at least, and probably 4, of the other 10 could have been saved. Five of the 10 patients who died were not operated on, and these are the only cases in the entire number of 416 which were not operated on. Four of these cases were admitted in a dying condition and would not have been operated on by any one, and should consequently be excluded from the list, but this would leave the statistics open to the criticism that there might be a difference of opinion regarding the moribund condition. Case 6, although not operated on, should be charged to the method, although his weakened condition (he had been an invalid from infancy, being a rachitic child) practically precluded the possibility of a recovery.

During the same time I treated a number of cases of acute perforative appendicitis by this method who recovered but have not been operated on. These I have not included in this list because the diagnosis has not been confirmed anatomically. But there can be no reasonable doubt about the correctness in the diagnosis in these cases, and if counted they would still further reduce the percentage of mortality.

I will state, also, that all of the ten cases of acute perforative appendicitis which died had been previously treated by the use of cathartics and food by mouth, and that of all the cases which received neither food nor cathartics from the beginning of the attack there has been no death.

The fact remains that there is a distinct class of appendicitis cases in which the mortality after an immediate operation is especially high in which the vast majority of the patients may be saved if they receive absolutely no food nor cathartics by the mouth, the operation being postponed until it seems safe. A slight amount of rectal feeding, consisting of one ounce of one of the liquid concentrated foods in the market dissolved in three ounces of warm normal salt solution given by the rectum every four hours is sufficient. Small sips of hot water often repeated are usually borne well.

DR. J. D. SULLIVAN, Brooklyn—From this discussion it seems to be the general consensus of opinion that early operation is the proper treatment for every well-defined case of appendicitis. It appears to me that our knowledge of the disease makes it our duty to advise and practice early operative treatment as the only safe course to pursue. It is a great advantage to the patient to be able to close the wound and obtain primary union. This is one point I wish to make in favor of early operation. The sooner we operate after recognizing the disease, the better are our prospects for closure of the abdominal incision and primary union. The advantages to the patient and surgeon of closing the abdominal wound are so many and so great that I now practice this method in cases where I would formerly employ drainage; and with better results. If there has been some local peritonitis without the formation of an abscess, or even if there has been a moderate degree of general infection without the formation of pus, I usually wash out the abdominal cavity with a large quantity of saline solution, employing for this purpose a long glass tube attached to a fountain syringe such as is used for washing out the uterus, and having the water at a temperature of about 110 F. I insert the tube through the wound down into the pelvis, and while the water is flowing I move the tube about to the most distant parts of the abdomen so that the flushing is from the tube toward the opening in the abdominal wall. Having made use of three or four gallons of warm saline solution in this way I deem the abdomen sufficiently clean to warrant a complete closure of the incision. If I think the surface of the wound has become infected during the operation I sew up the peritoneum with cat-gut suture and only a portion of the wound in the structures external to the peritoneum and drain the wound outside the peritoneum. Experience has taught me that a limited amount of infection will be safely disposed of by the peritoneum and that the open tissues of the wound afford a good culture medium for germ infection if buried under the skin. By separating the limited amount of infection within the peritoneum from the unlimited degree of infection in the other wounded tissues we obtain much better results than if the infected wound were in open communication with the abdominal cavity, and many of the objections to through drainage are eliminated.

DR. LOUIS C. AGER, Brooklyn—I am not a surgeon but only a pathologist, and I want to speak on the question of diagnosis. I have a specimen of perforated small intestine which I think will interest the surgeons. The diagnosis was appendicitis and the appendix was removed. The specimen is of interest because it shows the condition of the appendix at the time of operation. The patient died a few hours after the operation, and the autopsy showed that an apparently normal intestine had been perforated by a lumbricoid worm about eight inches above the appendix, causing septic peritonitis and death.

DR. JOHN B. MURPHY, Chicago—I did not expect to discuss this subject on this occasion as it seems to be rapidly coming to a solution, notwithstanding the apparent difference between the two doctors in reference to the various methods. We have come to the conclusion to-day more unanimously than ever before in this Association that the time for the operation is within the first thirty-six hours. We are agreed on this as medical men; we are agreed on it as surgeons. If we are agreed on this one point, stop there. One gentleman has put the proposition, what does the physician do when he gets appendicitis? He sends for the surgeon, and he sends within an hour or two of the time he gets the pain. Can we as medical men, can we with practical uniformity, make the diagnosis in that period? Yes, it can be done by the medical man, and it is no longer necessary to get a surgeon to make a diagnosis of appendicitis. The time to send for the surgeon is immediately after the pain develops. I am glad to hear Dr. Ochsner take the position he does. We can, and should, avoid the mortality of 15 per cent. or even 4 per cent., and we can do so by diagnosing early, operating early and recognizing early the conditions present. Good operators within the limited period prescribed by Drs. Deaver and Ochsner prevent this mortality. If this is true what is our action? Just the same as it would be if a building is on fire, put the water on it now—not to

morrow. Will you do an operation that might be avoided? Yes. Will you do an operation where the appendicitis can not recur? No. That patients do recover without operation no one can deny. The mortality should be reduced to one-half of 1 per cent. The diagnosis can be made early. If the saving of the lives of people is entrusted to us we have one thing to do and that is to act within the limited time.

DR. W. J. MAYO, Rochester, Minn.—I had said that I would not discuss appendicitis because it seemed to me this discussion often led to more harm than good, but I want to put myself on record as believing in the early operation. I believe that every attack of appendicitis, even if recovered from, calls for operation. If a patient has appendicitis and you can get him early he will almost surely get well from the operation, barring accident. The operation should be performed at once and the results will be almost uniformly good. When it comes to actual conditions there is a class of cases that comes to the surgeon when the most favorable time has gone by. Some years ago I operated on all cases at the time they were admitted to the hospital, and my mortality was from 12 to 15 per cent. This mortality took place in cases that came into the hospital in bad condition from the third to the fifth day. They were tympanitic, with a tendency to vomit, and showed symptoms of obstruction of the bowels. In those cases I had a considerable mortality. Taking the plan of treatment adopted by Dr. Ochsner I dropped my mortality from 15 per cent. to less than 4 per cent. I do not believe that we should let all of these cases come to the operating table right away. I simply say that in such a case the stomach should be washed out and food absolutely prohibited for from 24 to 48 hours, by which time you will be able to deal with these cases with comparative safety. I have lost two cases by waiting too long. I would, therefore, limit this treatment to a certain class that has furnished a large mortality; cases that you fear will die, but I would operate on them in from 24 to 48 hours, or as soon as it appears that the condition will warrant it. It is in these cases that previously I had my mortality, and by a radical operation not only was there the death rate mentioned, but also a high percentage of fistulas. I can only say that since I have changed my time of attack and handled these cases more gently I have had fewer deaths and a fistula is rare.

DR. JACOB FRANK, Chicago—I shall confine my remarks to one point in Dr. Ochsner's discussion. He stated that if the stomach was kept entirely empty and nourishment given by the rectum, it would prevent peristalsis of the bowels, thereby preventing further infection by extension. On this theory, I believe he bases his successful treatment of certain cases of appendicitis. If I am correct in this statement I must beg to differ from his views, and shall give my reasons for doing so: In 1883 I published a case in the *Correspondenzblatt* where rectal alimentation produced a retrostalsis, and the patient vomited the food injected; this occurred several times in the same individual. After this I made observations on dogs, and could produce the same symptoms in a certain number of them. In *THE JOURNAL of the American Medical Association* for 1901, p. 429, a very instructive article by Albert Bernheim, M.D., of Philadelphia, will be found, where he made observations on the human and on animals concerning retrostalsis. I know that many operators will agree with me that even a little water injected into the rectum in many cases produces vomiting, and general practitioners have often observed patients who became nauseated from a small enema. I have often observed patients get a violent colic from a small amount of fluid. In order for the Doctor to prove his theory he will have to disprove the fact that a retrostalsis can take place from injecting food into the rectum.

DR. DEAYER, in closing—I am glad and sorry that I have had such an extended discussion. I was going home on the 5:20 train, but I could not possibly leave Saratoga under these circumstances without replying to the distinguished gentlemen who have kindly discussed my paper. I agree with Dr. Abbe as to the pathology. It resolves itself into a question of drainage. Dr. Gibbons has brought the subject out very clearly, and it is very interesting to note that he has advanced views on this subject. I recollect distinctly something of Dr. Stillé's idea on

idiopathic versus traumatic peritonitis. I do not understand all of Dr. Ochsner's statements. I do believe, however, that he does not get the class of cases I do. You may say that can not be, but I look into my bellies and know what I am dealing with, while Dr. Ochsner guesses at what is going on. I have recently returned from a trip to Berlin, and while there I understood that Sonnenberg claims that he could differentiate between acute catarrhal appendicitis, fulminating appendicitis, perforative appendicitis, the different varieties of peritonitis, etc. I can not agree with him, although this may be stupidity on my part. The more I see of appendicitis the less I know about it, and the more bellies I open the more impressed I am with my ignorance. The probabilities are that if I were to treat certain cases, on which I now operate, by starvation I might get better results, but I have not been so strongly impressed with Dr. Ochsner's argument to induce me to change. Personally, I have tried the treatment. Drs. Ochsner and Mayo may recollect my taking them into my receiving ward on one occasion and showing them an advanced case. This was one of the cases on which I would not operate. Dr. Ochsner suggested that I try his treatment when he thought the patient would pull through the attack. I did, and the patient died. Autopsy revealed a belly full of pus. So many of the cases coming under my care of this type, having been sick from five days to three weeks. Another thing that makes me think that there is a difference is because Dr. Ochsner gets no fecal fistula. I see fecal fistulae in a number of cases each year. A patient may have a fistula which will heal in time and he may have one which will not heal spontaneously. How Dr. Ochsner's treatment can dispose of general purulent peritonitis, peri-appendiceal abscess in connection with a pelvis full of pus: how Dr. Ochsner's treatment will prevent pressure necrosis from a collection of pus: how the treatment will prevent secondary abscess, pyelophlebitis, metastatic liver abscess, general sepsis, endocarditis and so forth, I am at a loss to explain, and as Dr. Ochsner has not explained and has made no mention of such pathologic lesions I have no hesitancy in saying that he sees an entirely different class of cases of appendicitis than I do. The class that he sees evidently get well by doing nothing. In the speaker's experience the pathologic appendiceal storm has spent its force within a comparatively few hours of the onset of the attack in the cases that do not recover practically by doing nothing; therefore, unless the treatment outlined by Dr. Ochsner clears up the debris and leaves the field of attack as it was before the storm, it can not possibly be of any specific service. In short, to accomplish that which he would make us believe it does, it must make the peritoneum capable of absorbing almost anything in the shape of pathologic debris.

Washing out the stomach and giving nourishment by the bowel where the stomach is irritable, I am sure most of us do both before and after operation; therefore, with this much of Dr. Ochsner's treatment I agree. I take exception to giving opium and to the use of antiplogistine or any proprietary agent; the latter I have seen on Dr. Ochsner's patients. I am very sure that the mortality of appendicitis will be increased rather than lessened by Dr. Ochsner's treatment. Not in Dr. Ochsner's hands, perhaps, but in the hands of those who are averse to early operation, thus giving them a pedestal from which to proclaim against the radical treatment.

DR. SMYTH, in closing—This has been a most interesting and instructive discussion, but the hour is so late I will say very little. Undoubtedly we must be guided by the experience of each other and by our own experience too. In my own experience both from operation or following operation I believe I have seen more cases where there is involvement of the general peritoneal cavity. In other words, the cases in which the pus was localized, no matter how extensive it was, they all recovered. I think we are all agreed that operation should be done in every case in the early stages. The question of difference now is in those cases which we do not see until about 36 hours have elapsed. Shall we operate on those cases at once or wait until about thirty-six hours later? I should not hesitate to wait a certain length of time could I be sure that the process would remain localized and the pus would remain as an

conception of why they came, and afterward console themselves with the idea that they must have been drunk at the time. In some instances, evidently, the most prominent early symptom is a sudden maniacal impulse to drink to stupor, and on recovery the trance condition begins.

Gourmands and wine drinkers of this type display most unusual conduct or paroxysms, associated with chills or profuse sweating followed by stupor, then the dazed trance state follows. A number of cases under my care have but indistinct recollections of events preceding their admission for days and sometimes weeks. To their friends their conduct was strange, but the general symptoms were not those of alcoholic intoxication, but rather of general stupor from some brain trouble.

In these trance cases there is not necessarily any sudden explosive symptoms, but more often a sequence of mental degeneration, noted by defects of reason and emotional instability. In these three classes nearly all alcoholic epileptics may be grouped. The paroxysms and explosions of nerve energy, also hallucinations and delusions, are probably always present. Acts of violence, homicidal impulses, sudden chills, followed by motor spasms and sleep, are most significant symptoms.

A number of inebriates suddenly develop delusional states which are commonly seen in nearly all epileptics. Delusions of grandeur or fear of sudden death from injury, passing off in a short time, are intimations of epilepsy. These symptoms following or associated with the excessive use of alcohol are still farther confirmations. There can be no doubt that alcoholic epilepsy is increasing. In a recent examination of two hundred cases over 50 per cent. showed well-marked symptoms of epileptoid states. Inquiries indicate the increasing frequency of convulsive symptoms, resembling epilepsy, and there can be no doubt that these symptoms are coming into greater prominence yearly.

ETIOLOGY.

In some personal studies made ten years ago epilepsy was noticed in 5 per cent., and obscure convulsive symptoms associated with inebriety were recognized in, at least, 10 per cent. more cases. In all not over 15 per cent. of the cases then studied exhibited symptoms of this condition. In the police records the number of convulsive spasmodic intoxications with strange symptoms of mania and sudden nerve explosions of conduct have been known to occur in over 50 per cent. of all the cases. They are termed delirium tremens cases in many instances and the convulsions which occur are all considered part of the alcoholism from which the patient is suffering. Many of these police-court cases with well-marked epileptoid symptoms die before the later stages of epilepsy are reached. It is a fact that has not been recognized that sudden and convulsive intoxications are very often followed by pneumonia and death. Pneumoparesis seems to be the special form of disease which follows. In the first class of epilepsies which I have noted, these sudden pneumonic collapses are very common. In the second class of dementia, cerebral hemorrhages and nephritis are also common sequences. Homicide and suicide are frequent in both these classes. In the third class of trance cases well-marked epileptic convulsions are more pronounced.

In both of the other classes epilepsy may appear in its classical forms and inebriety subside, or the use of spirits may continue in diminishing quantities. In all these cases acute inflammations of the kidneys, of the liver and stomach, may occur suddenly, followed by

death. Well-marked classical epilepsy, seen in an inebriate, is of short duration.

INFLUENCE OF COMPLEX ALCOHOLS.

The increasing prominence of these epileptoid symptoms in the inebriate of to-day is apparently traceable to the changed form of spirits used. While it can not be stated authoritatively that this is the most prominent cause, it is evidently very influential and responsible in a large degree for many of the symptoms which follow. Within a few years highly fortified and flavored alcoholic drinks have become very popular, such as bitters, vermouths, absinthe, cocktails, high-balls, champagnes and other high-sounding names for fortified and strong-flavored alcohols. These drinks are nearly always composed of new and cheap alcohols, and frequently wood-spirits and often whisky from potatoes and beet roots are used, depending largely on the price in the market. These alcohols are concealed by flavoring substances, such as bitters and syrups, the purpose of the dealer being to increase the profit and make the drink attractive.

When these different drinks are given to animals, well-marked convulsive phenomena follow. The intoxications are always sudden and paroxysmal. Champagnes resemble these drinks in their effects only the period of exhilaration is longer and more intense and the coma following slower and more profound. By these mixed drinks the blood is driven to the brain with great violence and vasomotor paralysis comes on early, in some cases resembling a shock from injury. The control centers of the brain are very quickly broken up and the degree of intoxication is marked and prolonged. The bitters, absinthe and cocktail compounds have a peculiar paralyzing action on the sensory and motor centers. This resembles toxic convulsions in the disturbance and explosive character of the symptoms. In club-houses and in high-class bar-rooms where these drinks are popular, the exhilarations and stupor following seem to have a direct connection with the spirits used.

Among the lower classes and in cheap bar-rooms the same convulsive class of intoxications with wild fitful manias and heavy stupors are seen. How far wood alcohol is used in these highly-flavored drinks can not be ascertained, but every year the production of this alcohol is increasing beyond the normal demand; and this excess, selling at half the cost of other alcohols, is used up in some unknown way. The cheap brandies and whiskies, no doubt, contain this form of spirit. The large importations of bitters and absinthes and their manufacture in this country are also evidence of the changes in the character of the drinks used. The cheap champagnes manufactured in this country, while less irritating than foreign drinks of this kind, are more largely used than ever. The physiologic effect is that of intense irritation, congestion and paralysis.

It is the form of alcohol that is dangerous, not the compounds mixed with it. In the experiments of Dumont's, in which various alcohols were given to dogs and goats, it was proven beyond doubt that complex alcohols were convulsive in their action, producing local as well as general paralysis. The more complex the alcohol the more dangerous it was. Beyond the influence of mixed alcohols in the etiology of these cases, there are to be considered the neurosis and psychosis, both from hereditary surroundings and bad living. There is in many cases predispositions for nerve explosions which makes the person more susceptible. This must be taken into account in estimating the symptoms.

DIAGNOSIS.

The diagnosis in these cases is usually not difficult. While the general toxic states are alike differing only in minor particulars, there are sometimes very striking variations which have apparent connection with causes that are known. It is evident that the patient who drinks quantities of mixed alcohols and develops epileptoid symptoms is suffering from some form of toxic concussion, manifested in this way.

In other instances, the accumulation of toxins, formed both within and without the body, concentrate on the nerve centers, producing explosive symptoms. The masked cases are always difficult to determine except from a careful study of the habits and surroundings of the patient. The sudden onset of strange, unusual symptoms suggest epileptoid conditions. The excessive use of spirits preceding the paroxysm or fit are always significant hints of this condition. In a recent case under my observation, a moderate drinker after two glasses of champagne became delirious, maniacal, and while walking to his room had a distinct convulsion. This was the culmination of a long premonitory period in which the toxic symptoms showed the tendency to take on this form.

PROGNOSIS AND TREATMENT.

The prognosis is always grave and unless the alcohol is removed at once the prospect of intercurrent disease or death or pronounced epileptic symptoms is very serious.

In the treatment, total abstinence from all spirit compounds with brisk elimination, restricted diet, nerve and brain rest continued for a long time give the only hope of restoration. Often a radical change of business and surroundings is most essential for successful treatment.

SUMMARY.

Some of the facts I wish to make prominent are:

1. Alcoholic epilepsy is increasing rapidly in this country.
2. It is a psychosis and neurosis which should be recognized, having distinct symptoms, the recognition of which is imperative in the treatment.
3. Where the toxic symptoms are convulsive and explosive and come on suddenly, the future of the case is very ominous and the warnings from these symptoms should be heeded.
4. The connection between mixed drinks and these spasmodic symptoms are traceable and should be considered in the prognosis and treatment.
5. The treatment and curability of these cases can be carried on with great hopefulness, and undoubtedly in the future will become a prominent part of the work.

DISCUSSION.

DR. C. H. HUGHES, St. Louis—I do not agree with all that Dr. Crothers has said on the subject, among other things being his assertion that the sudden onset of alcoholic epilepsy is the gravest form of the disease. The first case of genuine alcoholic epilepsy that ever came under my observation, outside of a lunatic asylum, occurred for the first time in an individual who was on a drunk. It was the first attack of this kind that he had ever had. He was seized just as Caesar was in the market-place at Rome, although he sat at the drinking table and fell under the table, convulsed and unconscious, and with frothing at the mouth, and the usual sequelæ of a well-established case of severe epilepsy. I was interested in that case, of course, because I saw it in its inception, and I then for the first time knew of alcoholic epilepsy. I wondered if the man were going to become a constitutional epileptic. I did not know so much then on the subject as I do now. I had not then

been superintendent of an insane hospital, as subsequently I saw several hundred patients daily. I was then a young army surgeon, not 22 years of age. I took this man, who was a personal acquaintance of mine, to my hospital and took care of him and nursed him through the paroxysm. He went to sleep after the paroxysm had passed off and he slept in the hospital until the next morning, when his recovery seemed complete. I have watched that man ever since and he is living to-day and has filled some important positions in life. To my knowledge, he has never had any similar attacks. He has modified his habits of drinking. I told him exactly the condition he had been in, and I think I frightened him into a better life. This was purely a case of alcoholic epilepsy. Of the existence of this form of epilepsy I have never since entertained a doubt. Alcohol is a most potent causative and developmental factor in the generations that immediately succeed inebriate lives. The tables of Mognan and others have clearly established this.

DR. J. P. McBRIDE, Los Angeles, Cal.—I recall a case of this condition in a young man about 25 years of age, who was a very light drinker. About once a year he would go on a drunken spree and he always had an epileptic attack during the continuance of this condition, which would usually last from three to four weeks. During the intervals between these sprees he never had any attacks. At the age of 26 he suffered from delirium tremens and died, and during this last spell of drinking he had suffered from very frequent epileptic attacks. It has occurred to me to ask the Doctor what has been his experience in this line and whether, if these cases abandon the drinking habit they get well or if some of them get well, and about what proportion.

DR. JAMES H. LLOYD, Philadelphia—I think there is no subject more obscure, nor one about which we ought to dogmatize less than the subject of the etiology of epilepsy. I have listened to the paper of Dr. Crothers with a good deal of interest. I think we may admire Dr. Crothers's skill in psychologic analysis and I believe his large experience in this class of cases entitles him to respect and deference; yet in some ways I hardly feel like following him in all that he has said. In the past I have had relations with hospitals containing large numbers of epileptics; I have seen a great number of them, but I have never quite assured myself that there was any distinct form of epilepsy that could be called alcoholic epilepsy. I grant, of course, and we all know, that there are plenty of epileptics who are alcoholics; that there are plenty of epileptics who drink to excess, who get drunk; but that we have a distinct class of epileptics whose disease bears a relationship to excess in alcohol is a question, about which, as I say, I will not speak dogmatically, but about which I have always felt very doubtful. My feeling has been that we should regard alcohol as an exciting cause of epilepsy, a contributing cause, but not necessarily the essential cause. There are a great many things that will cause a convulsive attack; for instance, uremic poisoning, the poisoning which occurs in the pregnant woman, an injury to the brain, the poisoning of scarlet fever or the effects of some other diseases; all these act as exciting causes of convulsions, but we do not say that we have a uremic epilepsy; that we have a scarlet fever epilepsy, etc. We know that these factors act on the nervous system and produce epileptic attacks. My belief is that that is practically what we have in the cases of alcohol producing these epileptic attacks. In other words, I think if you take a man who is perfectly normal, who has no distinct tendency toward epilepsy, you can not make an epileptic out of him by making him drunk. If this could be done, I think a good many more of the American population would be epileptics. You can not make epileptics out of inebriates, but you can make inebriates out of epileptics; and that is a very different thing. There is a tendency in certain forms of epileptics to become inebriates; it is a part of their degeneration; it is a part of their run-down nervous system. After the onset of the epileptic attacks, they may take to drinking and the epilepsy in that case acts as a predisposing cause of their drinking, as much as alcoholism is a producing cause of epilepsy. It is hard

to say which has occurred; it is hard to decide which began first. I think we must consider this matter carefully and not dogmatically. This whole subject has to be settled with the greatest accuracy and care, and I am not certain that we have yet at hand the method or the knowledge that will permit us to say positively that we know what is the cause of epilepsy. I feel that this is an important question, because, as neurologists assembled here, we do not want to put ourselves on record too absolutely; we want to leave our minds open in reference to this whole subject.

DR. J. M. KENISTON, Middletown, Conn.—In reply to the question asked by Dr. McBride, I might state that in Middletown we have had a number of cases where the epilepsy has arisen in the victim of chronic alcoholism, and in these cases the symptoms did not disappear on the removal of the alcohol. The seizures are apt to be rather infrequent, from 4 to 10 yearly, some of the cases having remained without attacks for a year or more. My experience has been somewhat limited in these cases, and has been confined entirely to male epileptics. I feel from my experience that there is rather more of a tendency to dementia in this class of cases of epilepsy than in any other, and that moral indifference is one of the inevitable sequels of alcoholism. The onset of all my cases occurred in late middle-life.

DR. A. B. RICHARDSON, Washington, D. C.—I agree that the class of cases the Doctor's paper describes are found in the experience of all of us, and the only question I shall raise is in regard to the interpretation of them, and in regard to the erection of this new form, or rather special form of epilepsy called alcoholic epilepsy. I think he will agree with me that the class of cases he describes arise also from other causes as well as from the excessive use of alcohol. Take, for instance, the acute forms of the disease—they are frequently produced by other causes and, in fact, I recall but very few cases where they could be attributed to excessive use of alcohol. Now, I think it is always better to keep our classification of disease just as simple and practical as possible. In any case addicted to the use of alcohol, especially where the use has extended over a long period of time, occasionally you will have convulsive attacks. Should all of those attacks be called epilepsy? I do not suppose that the Doctor would agree that they should be so called. As the last speaker has stated, convulsive attacks, of course, occur in a great many diseases. The excessive use of alcohol acts as an irritating cause in some manner or other to produce these epileptiform attacks. I think we all agree that occasionally the excessive use of alcohol may produce a typical epileptic attack. But we have a great many other causes also, and you may as well call every one of these a typical form of epilepsy. The question is whether, as our knowledge is at present, the condition which he has described is peculiar to this cause of the disease. I think we ought to restrict the term "epilepsy" to that form of the disease which is permanent in its manifestations and frequent in its occurrence, and not apply it to convulsions which come on from irritating causes now and then.

DR. WILLIAM J. HERDMAN, Ann Arbor, Mich.—I think we all recognize the fact that chronic alcoholism may play a part in the production of these epileptic convulsions, just as it acts as an agent in the production of dementia. There is in all these cases due to chronic irritation a mental reduction which undoubtedly is structural in character. Now, as has just been said, that reduced structural condition can be brought about by many other causes than alcohol. We recognize a great many other causes producing it aside from alcoholism. It would have been very interesting to me if the Doctor had added to his paper some information concerning the previous history of these cases. Some of them were evidently cases of acute alcoholism; others were cases of chronic alcoholism, but if in all of them he could have given us evidence of hereditary alcoholism in their ancestors, it would have enabled us to arrive at conclusive decisions along the lines with which we are all familiar. These cases of chronic alcoholism in many cases terminate in epileptic manifestations. I do not recognize in the description he has given of these cases that they were different in any particular from the epileptic attacks due

to other causes and, therefore, that does not justify a separate classification, and as has just been said, if we should put into a separate classification each case of the condition according to the factors producing it, we would have a great many more classes of epilepsy than necessary.

DR. RICHARD DEWEX, Wauwatosa, Wis.—We know that it is a striking fact regarding this class of cases (of which I have happened to see a large number) that in some cases the epilepsy or any convulsive manifestations have not been present, so far as one can learn, at any other time, except in conjunction with alcoholic excess. There seemed to be no convulsive attacks except when the individual was heavily under the influence of alcohol, and the number of attacks was frequently very small, in some cases occurring but once or twice in a lifetime. Then again there are other individuals who have never used alcohol to excess who have had but a single attack in a lifetime, or perhaps may have had two or three attacks in a lifetime; this makes the matter more obscure. One other point: the cause to which Dr. Crothers has referred, of a toxic effect being produced by the use of an inferior class of spirits, especially wood alcohol, would not apply to all cases, for I have seen cases largely where the patient used only a very good quality of spirits.

DR. F. SAVARY PEARCE, Philadelphia—The subject is most interesting and I will simply detain you for a few moments in regard to the treatment of these attacks. I believe that a good many of these attacks or epileptic phenomena are due to congestion of the brain itself and, even when the patient is in an acute alcoholic state, he has, of course, a congestion of the brain. I had under my care only a few days ago a gentleman who has a very good past history in every way. He was suddenly taken during the recent warm spell with a typical attack of epilepsy. I saw him when he was in the third convulsion which he had had during four consecutive hours. The sphincters were intact except in the third convulsion; and it was a typical case of epilepsy as regards all three of the convulsions. I promptly bled the man, withdrawing over a pint of very dark blood, which seemed to be the most rational form of treatment. The man improved at once and in a week he was apparently well. I believe that this form of treatment is the proper method whether alcohol is the cause of the attack or not. In this condition the brain congestion itself at the moment is responsible for the epileptic phenomena.

DR. HUGHES—I want to ask the Doctor if he will, in his reply, kindly explain what he means by the statement that the treatment of one of his cases was changed to the bromids and then bromidism followed, resulting in death. Then, I would like him to explain what he means by the term alcoholic epilepsy being a new one to the literature. I have in mind the fact that Esquirol, before I was born, claimed that many of the cases of epileptic insanity are due to alcoholism, and in discussing the subject of epilepsy he speaks of the excessive use of alcohol as being one of the causes of the development of a form of epilepsy associated with insanity. Then, the conditions of double consciousness mentioned and the automatic states are also referred to this same cause. In dementia, what we call "alcoholism" now, but which was called "inebriety" then, was commonly known as the cause of this condition. I would like to know the number of cases in which the epilepsy developed where there was reason to suppose that there was epilepsy in the family and the manifestations were brought out by the alcoholism, and the other cases where it was produced solely by the alcohol. In the case that I mentioned there was no history, and when the drinking subsided the epilepsy did not recur. I think that Dr. Crothers has had a peculiar kind of experience; he has had an experience with alcoholic epilepsy without the insanity and this is especially valuable from the standpoint of insane asylum physicians.

DR. T. D. CROTHERS, Hartford, Conn.—In my regard, alcoholic epilepsy is simply a name and not a distinct disease. We do not know anything of the pathology of epilepsy and can only speak of it as a form of degeneration possessing symptoms more or less uniform. There is no true division of

these symptoms in the alcoholic from other cases, because there is such a multiple of causes. We can only take the excessive use of alcohol as one of them. It is not a distinctly new term, but it has many symptoms which seem to be peculiar and common to it. Most of these symptoms indicate a toxic condition. Epilepsy is often a toxic and convulsive state. Alcoholic toxins and other causes are likely to produce this state. We know that epilepsy is one of the active causes of insanity. The term alcoholic epilepsy is practically new. Ten years ago the term was seldom used, while to-day it is frequently mentioned. Many of the toxins may produce symptoms which resemble alcoholism. Epilepsy, alcoholism, morphinism, dementia, consumption, sudden collapse and hemorrhage of the brain may all follow from the presence of toxins. The symptoms will change widely. There are some cases which could be attributed solely to the use of alcohol, but even here some long predisposing causes are at work, usually some diseased state of the neurons, some former degeneration existing before the attack. Such persons nearly all die from acute nephritis or cerebral hemorrhage. Then, it is another point of clinical interest, that is that the use of the more toxic alcohols produce symptoms which resemble epilepsy. These are active causes which in modern times are very prominent. Concerning convulsive alcoholism, convulsive epilepsy and convulsive disease of the brain, it is a striking fact that these symptoms are becoming more common, and I think that a great many of them can be directly attributed to the use of the mixed drinks to which I have referred. If the police court records of drunkenness with convulsive symptoms were examined, many of them would be explained by the term alcoholic epilepsy.

THE PATHOLOGY OF CHROMIDROSIS.*

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The name chromidrosis implies an anomalous secretion from the sudoriferous or sweat glands characterized by colored perspiration. Its occurrence is exceedingly infrequent; Foot,¹ in a careful review of the literature dating from 1709 to 1868, has been able to enumerate but 38 cases, to many of which a doubtful character must necessarily be attributed. Fowie's² careful historical review. 1709-1891, does not add many well-defined cases, and surprisingly few have been reported in the literature of recent years. Its marked infrequency can be best appreciated by referring to the Van Harlingen's³ statement, that "it is so rare as to be a curiosity rather than a disease."

Those who have written on the subject, almost without exception, are of one accord as to nature, and attribute to the condition a disorder, functional or otherwise, of the sweat glands. This is especially evident in all the text-books of skin diseases, where the subjects are not alphabetically arranged and follow some system of classification (Hyde,⁴ Hardaway,⁵ Morrow,⁶ Kaposi,⁷ Duh-ring,⁸ Joseph,⁹ Stelwagon,¹⁰ Shoemaker,¹¹ Schamberg,¹² Fox,¹³ Gottheil,¹⁴ etc.); in these the affection is invariably classed with the anomalies of glandular secretion, namely, the sudoriferous glands, and is grouped with hyperidrosis, anidrosis, bromidrosis, uridrosis, hemati-drosis, etc. In those which follow an alphabetic arrangement an anomaly of secretion is, as a rule, directly attributed, or indirectly implied (Jackson,¹⁵ Van Harlingen,¹⁶ etc.), apparently a few (Lesser,¹⁷ Mracek,¹⁸ Bulkely,¹⁹ Neumann,²⁰ etc.), studiously refrain from

committing themselves. It is surprising that some of the earliest observers (Nelligan, Wilson and Gintrac) have attributed the condition to a stearrhea, and Turenne to a metastasis of the eye pigment, facts which seem not so remarkable when we consider that the early investigators were very keen observers and relied almost exclusively on their powers of personal observation.

The color of the secretion varies with different cases. green, blue, purple, black, brown, yellow, red and intermediate shades. Black is the most common occurring in one-half the cases reported by Foot. Cases characterized by red pigmentation are generally associated with a reddish incrustation of the adjacent (usually axillary) hairs, the bacteriologic examination of which reveals the condition to be due to a *Zooglea* (*Bacillus prodigiosus*), which grows in rose-red colonies and often gives a history of direct contagion. These cases can not be properly classed with the so-called chromidrosis, but belong, by nature, with greater propriety to the class of so-called vegetable parasitic affections of the skin.

In my own clinical and private practice I have noted eight cases of this so-called red chromidrosis during the

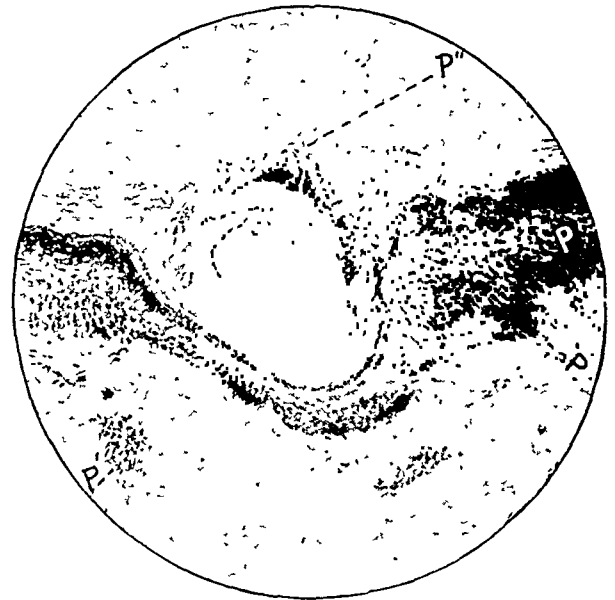


Fig. 1.—Hyperkeratosis in opening of hair follicle. Accumulation of pigment in rete, P and P'; in corium, P'', and stratum corneum, P'', of immediate neighborhood. (Winckel, oc. 2, obj. 5.)

past two years, in most of which there was not only a reddish discoloration of the incrustated hairs, but also distinct reddish discoloration of the superimposed garments. If this class of cases is included, chromidrosis is by no means a rare affection, and it probably falls to the lot of nearly every close observer to note these cases from time to time. At present I have, among others, two patients under observation with this form of affection, an uncle and nephew, the latter of whom is a practicing physician, who has taken up his residence with his uncle during the past four years. The physician states that his infection is of five years' duration, and that his mother, with whom he then resided, is similarly affected, and has had her affection for almost the same length of time. His uncle acquired the affection almost four years ago, and more recently his daughter has also been infected. The axillæ in all the cases have been involved, and all the cases show the red discoloration to a marked extent. From these and other cases in the literature it is clearly evident that these forms of reddish discoloration are readily contagious, and owe their cause to a local infection, entering from without. Their para-

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. W. T. Coilett, L. Duncan Bulkley and W. L. Baum.

sitic nature is further evidenced by the fact that some of my cases of so-called red chromidrosis have readily yielded to a few applications of Wilkinson ointment.

Though nearly all who have reported cases of red chromidrosis have attributed the cause to a parasite, different authorities vary as to its true nature. A few (Labrares et Cabannes²¹) strongly deny its bacteriologic nature; Temple²² attributes it to the ingestion of potassium iodid; Stott,²³ to torulæ, which grow in rose-red colonies on potato culture at 38 C, and deep red at 0 C; Fowie²⁴ ascribes the cause to the *Bacillus prodigiosus*; Babesi²⁵ to a form of *Zooglea*, and Hartzell²⁶ to a fungus bearing a resemblance to the *Micrococcus tetragenus*. This marked diversity of opinion induced me to make culture experiments on potato, gelatin, agar, etc. Potato cultures served the best, and though contaminations were very common, involving different forms of sarcina, staphylococci and bacilli, deep brick-red colonies could be isolated in most instances, whose microscopic appearance was a *Micrococcus tetragenus*. Inoculation experiments were not attempted.

Let us now digress from the so-called cases of red chromidrosis and resume with the more well-defined

colored. The coat sleeve lining shared in the discoloration to such an extent that its renewal, for cosmetic reasons, every two months, became a necessity. The patient was able to take note of no other subjective or objective symptoms of any character whatever. The condition has persisted continuously for the past two years. Perspiration has not been excessive and to the patient's knowledge but slight.

When patient presented himself for examination, for the first time on March 5, 1902, the skin over the affected wrist was apparently normal; there was no evidence of any inflammation, and no disturbance of innervation. Compared with the skin elsewhere on the body and with the opposite wrist, there was a very slight, evenly-diffused pigmentation, as if the affected area had been lightly bathed with tincture of opium. It remained unchanged when scrubbed with pledgets of cotton dipped in water, soap, alcohol and ether and the pledgets themselves took on no discoloration. Pledgets dipped in chloroform removed the discoloration rapidly and left the areas thus treated much whiter by contrast than the surrounding area.

Examination of urine showed reaction faintly acid, no albumin, no sugar, no formed elements, specific gravity 1020 and no indican. Blood examination by Dr. Alfred Friedlander showed no variation from the normal.

An examination of the secretion, which was collected on pure white linen, revealed it to be insoluble in the ordinary solvents,

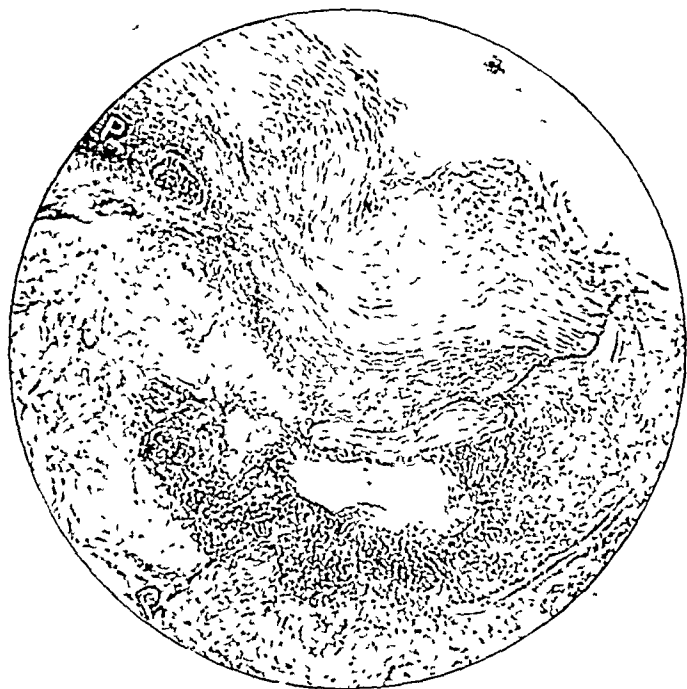


Fig. 2.—Two circumscribed accumulations of pigment in rete, and corium, P and P. (Winckel, oc. 1, obj. 3.)

cases, in which, according to Foot,²⁷ 34 out of 38 were women, 19 out of 29 were unmarried, age varied from 5 to 57 years, average being 22 years; the face, particularly the eyelids, is most commonly involved and uterine disturbance and hysteria are frequently associated. In nearly all the cases the attack comes on suddenly without apparent cause, and persists usually for a few years in intermittent form.

The case which I wish to report occurred in H. O., a brunette, a native of Germany, aged 53, a merchant of intelligence, good social standing, who has been married for 15 years and is the father of one child. His general health has been excellent; in 1898 he suffered with an attack of hepatic colic, which was followed by jaundice, and the following year, under severe medication, involving salivation, he passed a large number of gallstones. In a short time he regained his customary good health, which has been uniformly good since 1900. In 1901, he noted for the first time that the linen of his right forearm became discolored. The discoloration was a yellowish-brown and permanent in character, so that it could not be removed in the process of laundering. The discoloration was rapid and extensive, so that in two days' time a new cuff or a new shirt sleeve was very perceptibly and indelibly dis-

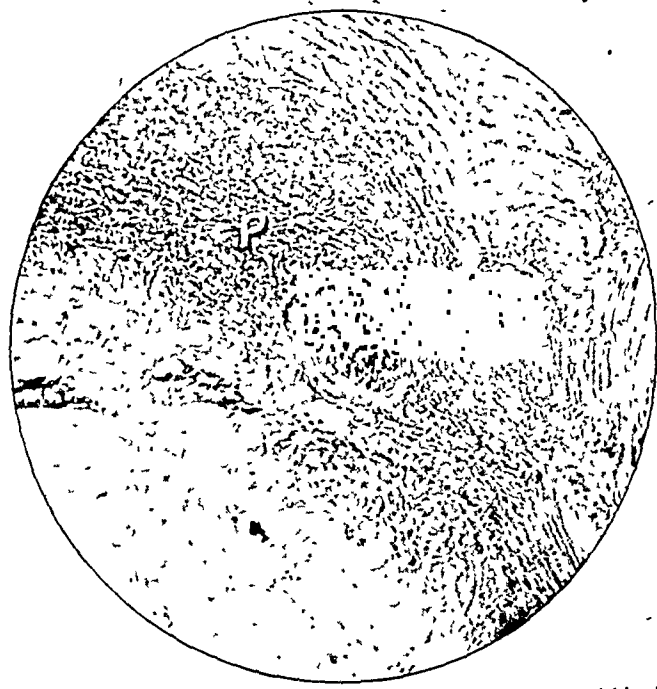


Fig. 3.—Circumscribed accumulation of pigment, P, within the rete malpighi. (Winckel, oc. 2, obj. 5.)

ether, alcohol, water, glycerin, zylol, etc., and readily soluble in chloroform, imparting to the latter a yellowish-brown color. Hydrogen dioxid exerts no bleaching action on the yellow color. When evaporated on glass slides it formed a smooth yellowish substance, which under the microscope revealed a semi-crystalline appearance, due no doubt to the admixture of old, dried-up epithelial cells and other detritus (Fig. 5); when previously filtered, the microscopic appearance is amorphous and structureless; when the chloroform is completely evaporated, the deposit retains a resinous character, readily taking the impression of the finger and showing with minuteness the folds and furrows of the skin, or can readily be etched by means of a needle.

The eliminated substance is unaffected by acids (nitric, hydrochloric, sulphuric, carbolic), and fails to give the characteristic reactions for indol, indican and bile pigments. The negative character of these reactions and the absence of indican in the urine is sufficient evidence, I believe, to dissociate this affection from renal and hepatic predisposing influences, notwithstanding strong opinions to the contrary (Labrares,²⁸ Hofmann²⁹) and the preëxisting liver disorder in this particular case.

On March 8, a small piece of skin was removed from the anterior surface of the wrist, near the ulnar border, central

to the area of greatest discoloration, for the purpose of microscopic examination. It was thoroughly washed for one-half hour in running water and hardened in successive alcohol; the use of formalin, Müller's fluid, etc., was purposely avoided, in order not to induce discoloration, or to conserve the blood, and thereby mask pigmentary changes. The preparation was imbedded in celloidin and sectioned in successive serials, and examined partially unstained and bleached, partially stained with polychrome-methylene-blue, eosin, hematoxylin-eosin, hematoxylin-picric acid, Van Gieson, thionin, orcein, etc. The unstained specimens and those faintly stained with polychrome-methylene-blue (Unna), decolorized with glycerin ether, showed the most interesting changes.

My interest was first centered in the microscopic appearance of the sweat glands; they are found to be normal, showing no cystic dilatation, no pigmentary infiltration, no discoloration and no inflammatory changes. In other words, no pathologic alterations, no structural variation from the normal can be detected in these elements, which, in any manner or form can induce, or result from, a so-called chromidrosis or colored sweating. (Fig. 5.) This finding accords with what would be naturally inferred from the nature of the pigmented elimination, the latter being thoroughly insoluble in

which have been previously bleached with hydrogen dioxid, or specimens which have been very faintly stained with polychrome methylene blue, and decolorized with glycerin ether. Many are located in external layers of the stratum corneum, exclusively in and around the hair follicles, and particularly those areas which show the above-mentioned hyperkeratosis. The greater quantity is distributed to the lower layers of the epidermis of those areas, where the pigmented bodies are accumulated to form compact masses, occasionally showing a central cavity and often distinctly walled off from the surrounding tissues. (Figs. 2, 3 and 4.) The lower layer of columnar or germinal cells of the epidermis of this region show marked pigmentation, pigment of the same form and color, as described above, and contrasting strongly with the pale germinal cells situated elsewhere along the epidermis.

In and around the papillæ, extending for some distance into the corium, and in close proximity to the hair follicles, adjacent to the pigmented germinal cells of the epidermis, are numerous small pigmented bodies, for the most part roundish, but often irregular in outline and retaining the same general analogy to the above-mentioned



Fig 4—Circumscribed accumulation of pigment, in corium, with a central cavernous space (Winckel, oc. 2, obj. 5.)

water, could scarcely be eliminated by a secretion essentially watery in character.

The general appearance and structure of the skin is almost normal. The epidermis, corium and subcutaneous connective tissue are normal in their general structure and contour. The stratum corneum, rete mucosum, papillæ, capillaries, ducts of the sudoriferous glands, show no marked variations from the normal. A marked hyperkeratosis is present around the opening of the hair follicles, and the adjacent stratum corneum is thickened to two or three times the natural size. (Fig. 1.) Associated is the entire absence of sebaceous glands. Although hair and their follicles were abundantly present, and innumerable specimens were carefully examined, not the vestige of a sebaceous gland was discovered in any of the specimens. Elastic fibers, though abundantly present, showed no marked variation from the normal.

Examination with the higher powers of the microscope readily show the presence of small, roundish yellowish particles, which for the most part are located in definite areas of the specimens. They can be most easily detected in unstained preparations, particularly those

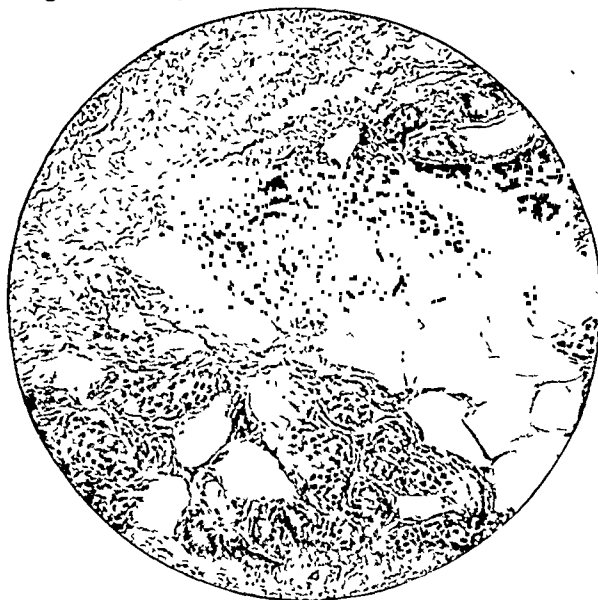


Fig 5—Showing normal condition of the sudoriferous glands. (Winckel, oc. 2, obj. 5)

pigmented bodies. The latter cells have an analogy to the so-called chromophore cells, which are believed to bear the pigment of normal cells from its origin in the cutis to the epidermal cells. They retain the same localization, and apparently perform the same function, the distribution of pigment from the cutis to the epidermis. They differ, however, materially in certain characteristics. They are smaller and more roundish in outline, and show no long proto-plasmic processes, so-called pseudopodia, by reason of which these cells were for a time supposed to possess ameboid movements and carry the pigment from its point of emanation to the epidermis. Ballowitz³⁰ has been able to demonstrate that the nerve endings penetrate these cells and envelope them thickly with dichotomous branches, thereby precluding their movement. He has also been able to demonstrate in the scales of fresh herring that the apparent change of form is due to the transposition of the pigment (which in the chromophores is finely granular) within the cells. The chromophores therefore probably serve as mere "stepping stones" or fixed carriers for the pigment in its course from the deeper structures to the sur-

face. The pigmented bodies in chromidrosis differ from the chromophores of ordinary pigmentation, in that their contents are not finely granular, but homogeneous and amorphous, and that they do not decolorize with hydrogen dioxid.

I was unable to determine to my personal satisfaction the ultimate source of the pigment in chromidrosis. That its source is from some point in the cutis is readily apparent from the examination of the specimens, but whether it springs from lymph or blood vessel, from pre-existing cell tissue, or what not, will be equally if not more difficult to determine, I believe, than the present unknown source of the pigment of the cutis. Its apparently free dissemination in the epidermis, tissue pre-eminently vascularized by lymph, leads me to concur with Moritz Cohn.³¹ that the pigment is derived from the lymph spaces of the cutis.

I regret that I have been unable to discover in my investigations into the literature any report on the histologic changes in any of the cases thus far recorded, inasmuch as a comparison would have been of great interest and confirmation of great value. No mention of chromidrosis is made in Unna's³² "Histopathologic

or predisposing cause. He is of a temperate, phlegmatic disposition, quiet, unobtrusive in nature and had noted the affection over a year before he became sufficiently interested to bring it to the attention of a physician. Simulation has been carefully ruled out by applying a coating of zinc gelatin to the affected area, after a previous application of chloroform, although there were little grounds for entertaining any suspicions. He is not addicted to drugs (Temple³³), vocation (Dyer³⁴) and trauma (Geschelin³⁵) exerted no predisposing influence, and he is not neurotic (Fowie,³⁶ Foot³⁷), parietic or epileptic (Delthil³⁸).

A case of simulation came to my notice in June, 1900. Miss R. F., aged 22, from Van Wert, Ohio, was consulted in regard to a reddish discoloration of the left palm and forearm, associated with shred-like desquamation of two years' duration. The case elicited much local attention and the diagnosis of erysipelas and a suggestion of amputation induced the parents to seek special advice. Red chromidrosis or simulation promptly suggested itself, and a two weeks' stay in the hospital with a plaster-of-paris bandage cleared up the condition and confirmed the latter diagnosis. A confession from the

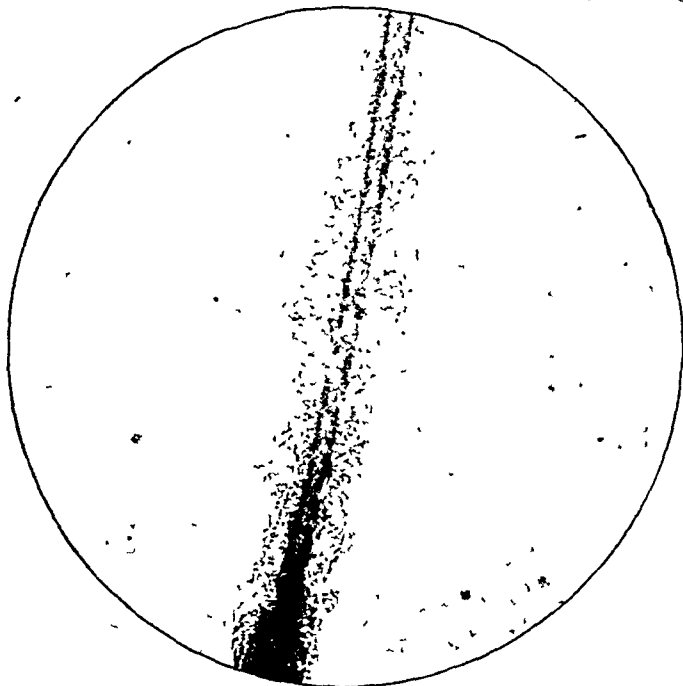


Fig. 6.—Concretion attached to a hair, from a case of red chromidrosis (Oc. 1, obj. 3, Winkel.)



Fig. 7.—Structural appearance of the concretion attached to a hair, taken from a case of red chromidrosis (Oil immersion 1/12, oc. 4, Winkel.)

der Haut," a work that is very comprehensive as regards the pathology of the skin and replete in all its detail. One case is hardly sufficient, especially in a disease which shows so many variations, to serve as a standard for all, but its marked infrequency precludes the reports of accumulated cases.

With the hope that a spectroscopic examination may have been able to shed more light on the nature of the eliminated pigment, a chloroform solution was sent to Mr. C. P. Fennel, who has kindly reported that absorption bands were not present, and hence it was not a product of hemoglobin or oxyhemoglobin. Sodium bands, somewhat expanded, were present, together with two faint, narrow interposed lines, which could not be read with any degree of satisfaction. A careful chemical analysis has not been attempted, but for reasons above stated I do not concur that it is derived from indigo or indican, bile or hemoglobin. I believe, for the present, it can be classed with due propriety with the large class of pigments of the body, the nature of a large number of which is, as yet, so little known and imperfectly understood. I am unable to attribute to my case any direct

hysterical young woman then revealed that she had been in the habit of applying crude carbolic acid locally and tinting the member with artificial rose petals dipped in water.

I have been unable to carry out any prolonged line of investigation in regard to treatment. It is somewhat difficult to suggest proper curative agents, and the same futility as regards treatment no doubt presents itself in this disease as in chloasma, vitiligo and other pigmentary disturbances. I have found that sponging the affected surface locally with chloroform is an excellent palliative measure and prevents the excessive staining so disagreeable and annoying to the patient.

To recapitulate, chromidrosis is not, as its name implies, an anomaly of sudoriferous secretion. Judging from the limited number of cases in the literature, and as a matter of common observation, it is an exceedingly rare affection as regards forms characterized by yellow and brown, and probably black, blue, green and intermediate shades of discoloration. Red chromidrosis is an entirely different and by no means an infrequent type

of affection, with an extraneous cause, probably some form of erythro-micrococcus-tetragenus infection from individual to individual, and yielding to antiparasitic remedies. In the light of this investigation the pigmented elimination, in the yellowish-brown forms at least, is insoluble in water, alcohol, ether, etc., is readily soluble in chloroform, stains linen indelibly, shows no reaction when treated with ordinary reagents, and is amorphous, homogeneous and resinous in character. Pathologic examination reveals the sudoriferous glands of the affected area to be normal, sebaceous glands absent, a hyperkeratosis around the openings of hair follicles and pigment accumulations near the hair follicles, in the stratum corneum, lower layers of the rete, and the adjacent cutis. The pigment is grouped in cell-like masses, is not finely granular and does not bleach with hydrogen dioxid like chromophores. Spectroscopic examination of the eliminated pigment reveals no absorption bands and hence it is not a derivative of oxyhemoglobin. In view of the pathologic findings, the absence of sebaceous glands, the normal condition of the sudoriferous glands, cases of so-called chromidrosis (excluding red forms) are anomalies of pigmentation and not glandular secretion.

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DISCUSSION.

DR. M. B. HARTZELL, Philadelphia—The so-called red chromidrosis of the axilla has nothing at all to do with the sweat glands, the sweat only dissolving the coloring matter of the masses on the hairs. While this affection is most frequent in the axillary region I have seen it on the hairs of the perineum. I recall a case in which I was not as successful as Dr. Heidingsfeld, although I saw the case at intervals for eight or ten years and tried everything to effect a cure. The woman's underclothing was stained a deep orange so that she was compelled to constantly change it.

DR. H. G. ANTHONY, Chicago—I hesitate to accept the pathology which finds the pigment a fixed tissue as well as being carried out through the sweat glands. The Doctor has said the sweat has not been subjected to a further chemical analysis. In the case which was subjected to chemical analysis the chemists and dermatologists found indican. Until such an analysis has been made I do not think he has a right to say that this cause is not due to the secretion of indican.

DR. W. S. GORTNER, New York—I confess it was not made clear to me how this pigment got to the surface. I would like to have some explanation.

DR. HEIDINGSFELD—I must confess my inability to satisfactorily explain the rôle which the pigment plays in the process of elimination. The source of the pigment and its conservation and distribution is an exceedingly obscure subject in not only normal conditions, but in the pigmentary changes more commonly encountered in vitiligo, chloasma, canities, pigmented nevus, sarcoma, etc., and it seems to me that some of my fellow members are requiring much from a condition which, at best, can offer relatively little. I dwell on the point of pigment elimination and pigment distribution as fully—and clearly in the paper as circumstances would permit. I believe that the process, to all appearances, is similar to the changes which accompany normal pigmentation, the pigment reaching the surface, from cell to cell through some form of stepping stone or carrier, from its source in the cutis. It can be traced directly by its presence, through the different areas mentioned, to its ultimate distribution in accumulated masses on the surface in the uppermost layers of the epidermis. I am firmly convinced that the sweat glands play no important rôle in this affection, as evidenced not only by their normal appearance and the pathologic changes in the other tissues, but also by the physiologic evidence of the insolubility of the eliminated pigment in aqueous solutions, which precludes its elimination from the sweat glands. Its insolubility in ether, alcohol, oil, etc., renders its elimination from the sebaceous glands also highly improbable.

THE BLOOD IN FILARIASIS.

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Since the discovery of the embryos of *Filaria nocturna* in the peripheral circulation by Lewis, in 1872, very few observers have devoted their attention to the changes in the blood associated with this disease.

In 1894 Bancroft and Bancroft¹ noted a leucocytosis in filariasis and published the following blood counts, no differential blood counts being made:

	Whites.	Reds.
Case 1.....	23,750	5,360,000
Case 2.....	12,000	6,000,000
Case 3.....	27,300	6,000,000
Case 4.....	21,500	6,000,000
Case 5.....	14,500	~ 4,600,000
Case 6.....	5,500	3,620,000

Lothrop and Pratt,² in 1900, found the whites in two cases to be about normal; their highest count was 8,000, lowest 3,500. Differential counts showed 4.6 and 3.5 per cent. of eosinophiles.

G. L. Gullard³ found a leucocytosis varying from 4,600 to 13,500, and an eosinophilia varying from 3 to 12 per cent. He observed the highest leucocytosis and eosinophilia when the number of embryos in the peripheral circulation was greatest; and a decrease in the leucocytes and eosinophilia accompanying the decrease of the embryos in the peripheral circulation.

A few months later Coles⁴ noted an increase of eosinophiles of 15 and 17 per cent. in smears made from cases of filariasis and bilharzia hematobia.

My attention was directed to this subject in the summer of 1900, while examining tissues removed at autopsy from a pest cadaver. A parent worm was found in one of the iliac lymphatic glands and numerous eosinophiles were noted in the capillaries of the several organs. (Case 1.) During the winter and spring of 1901, 426 specimens of blood taken from Filipino prisoners of war were examined. Two cases of filariasis were found.

CASE 2.—A. P.; male Filipino; native of Albay; has been in Manila about one month. No history of previous illness could be obtained. During past three months patient has had occasional chills and fever. Left iliac glands have been painful

two months, and the inguinal one month. Patient is a healthy-looking, well-built man.

Examination—Left conjunctivitis; pulsating veins in the neck; old variolar scars on arms; few râles and roughened breathing in right lung; heart dulness extended from 2 cm. to right of sternum to 2 cm. left of nipple line; area of pulsation from third to fifth interspace; sounds booming; liver and spleen normal in size. On the left side, immediately above Poupart's ligament, a painful tumor could be palpated. This tumor was, most probably, enlarged iliac glands. One inguinal gland was about three-quarters of an inch by one inch in size and painful. Both spermatic cords and testicles were normal.

Eight embryos were found in specimen of blood taken on April 4, 1901, at 11 p. m.; on April 6, at 9 a. m., one embryo was found.

Blood counts, on April 6, 9 a. m., were as follows:

Reds, 3,866,666; whites, 18,760. L., 10.66 per cent.; L. M., 5.66 per cent.; E., 12.33 per cent.; P. N., 69 per cent.; T., 3 per cent.; 200 counted.

April 17, noon. Reds, 4,700,000; whites, 22,000. L., 9.6 per cent.; L. M., 4 per cent.; E., 22.4 per cent.; P. N., 61.6 per cent.; T., 2.4 per cent.; 200 counted.

On April 18, beginning at 9 a. m., hourly counts of the number of embryos per c.c. and leucocytes per cm. (during day time) and differential white blood counts were made during the following twenty-four hours:

NUMBER OF EMBRYOS PER CC. OF BLOOD.

April 18, 9 a. m.	0	April 19, 1 a. m.	672
April 18, 10 a. m.	0	April 19, 2 a. m.	840
April 18, 11 a. m.	0	April 19, 3 a. m.	672
April 18, 12 Noon	0	April 19, 4 a. m.	672
April 18, 1 p. m.	0	April 19, 5 a. m.	504
April 18, 2 p. m.	0	April 19, 6 a. m.	304
April 18, 3 p. m.	0	April 19, 7 a. m.	84
April 18, 4 p. m.	0	April 19, 8 a. m.	0
April 18, 5 p. m.	0	April 19, 7 p. m.	84
April 18, 6 p. m.	84	April 19, 8 p. m.	0
April 18, 7 p. m.	252	April 19, 9 a. m.	84
April 18, 8 p. m.	504	May 1, 10 a. m.	252
April 18, 9 p. m.	672	May 6, 2 p. m.	0
April 18, 10 p. m.	840	May 8, 8 a. m.	0
April 18, 11 p. m.	1176		
April 18, 12 Midnight. 840			

April 18, 9 a. m. Reds, 4,720,000; whites, 23,000. L., 12 per cent.; L. M., 4 per cent.; E., 20 per cent.; P. N., 60 per cent.; T., 4 per cent.; 200 counted.

April 18, 10 a. m. Whites, 18,000. L., 12 per cent.; L. M., 4 per cent.; E., 17 per cent.; P. N., 65 per cent.; T., 2 per cent.; 200 counted.

April 18, 11 a. m. Whites, 18,666. L., 9 per cent.; L. M., 3 per cent.; E., 20 per cent.; P. N., 65 per cent.; T., 3 per cent.

April 18, 12 noon. Whites, 18,500. L., 11 per cent.; L. M., 6 per cent.; E., 21 per cent.; P. N., 59 per cent.; T., 3 per cent.; 200 counted.

April 18, 1 p. m. Whites, 26,666. L., 10 per cent.; L. M., 4.5 per cent.; E., 20 per cent.; P. N., 60 per cent.; T., 2.5 per cent.; 200 counted.

April 18, 2 p. m. Whites, 24,444. L., 10 per cent.; L. M., 5 per cent.; E., 22 per cent.; P. N., 58 per cent.; T., 5 per cent.; 200 counted.

April 18, 3 p. m. Whites, 20,000. L., 11 per cent.; L. M., 4 per cent.; E., 21 per cent.; P. N., 60 per cent.; T., 4 per cent.; 200 counted.

April 18, 4 p. m. Whites, 18,666. L., 12 per cent.; L. M., 3 per cent.; E., 15 per cent.; P. N., 67 per cent.; T., 3 per cent.; 200 counted.

April 18, 5 p. m. Whites, 18,000. L., 11 per cent.; L. M., 5 per cent.; E., 16 per cent.; P. N., 65 per cent.; T., 3 per cent.; 150 counted.

April 18, 6 p. m. Whites, 20,000. L., 14 per cent.; L. M., 5 per cent.; E., 13 per cent.; P. N., 63 per cent.; T., 5 per cent.; 150 counted.

April 18, 7 p. m. L., 16 per cent.; L. M., 5 per cent.; E., 12.5 per cent.; P. N., 61.5 per cent.; T., 5 per cent.; 150 counted.

April 18, 8 p. m. L., 14 per cent.; L. M., 4 per cent.; E., 19 per cent.; P. N., 60 per cent.; T., 3 per cent.; 200 counted.

April 18, 9 p. m. L., 13 per cent.; L. M., 5 per cent.; E., 11 per cent.; P. N., 68 per cent.; T., 3 per cent.; 150 counted.

April 18, 10 p. m. L., 13 per cent.; L. M., 5 per cent.; E., 15 per cent.; P. N., 65 per cent.; T., 2 per cent.; 200 counted.

April 18, 11 p. m. L., 15 per cent.; L. M., 4 per cent.; E., 15 per cent.; P. N., 65 per cent.; T., 3 per cent.; 200 counted.

April 18, 12 (midnight). L., 17 per cent.; L. M., 5 per cent.; E., 8 per cent.; P. N., 67 per cent.; T., 3 per cent.; 200 counted.

April 19, 1 a. m. L., 12 per cent.; L. M., 4 per cent.; E., 17 per cent.; P. N., 65 per cent.; T., 2 per cent.; 200 counted.

April 19, 2 a. m. L., 10 per cent.; L. M., 3 per cent.; E., 21 per cent.; P. N., 64 per cent.; T., 2 per cent.; 200 counted.

April 19, 3 a. m. L., 10 per cent.; L. M., 3 per cent.; E., 15 per cent.; P. N., 69 per cent.; T., 3 per cent.; 200 counted.

April 19, 4 a. m. L., 11.5 per cent.; L. M., 3 per cent.; E., 11.5 per cent.; P. N., 71 per cent.; T., 3 per cent.; 200 counted.

April 19, 5 a. m. L., 11 per cent.; L. M., 4 per cent.; E., 18 per cent.; P. N., 64 per cent.; T., 3 per cent.; 200 counted.

April 19, 6 a. m. L., 12.5 per cent.; L. M., 4 per cent.; E., 15 per cent.; P. N., 65.5 per cent.; T., 3 per cent.; 200 counted.

April 19, 7 a. m. Whites, 18,600. L., 13.5 per cent.; L. M., 3 per cent.; E., 17.5 per cent.; P. N., 63 per cent.; T., 3 per cent.; 200 counted.

April 19, 8 a. m. Whites, 22,000. L., 13 per cent.; L. M., 4 per cent.; E., 14 per cent.; P. N., 65 per cent.; T., 4 per cent.; 200 counted.

April 19, 9 a. m. Whites, 18,666. L., 12 per cent.; L. M., 4 per cent.; E., 16 per cent.; P. N., 64 per cent.; T., 3 per cent.; 200 counted.

April 27, 9 a. m. Reds, 5,200,000; whites, 23,000. L., 13 per cent.; L. M., 3 per cent.; E., D 14 A; P. N., 68 per cent.; T., 2 per cent.; 200 counted.

May 1, 10 a. m. Reds, 5,200,000; whites, 18,000. L., 16 per cent.; L. M., 4 per cent.; E., 18 per cent.; P. N., 60 per cent.; T., 2 per cent.; 200 counted.

May 6, 2 p. m. Reds, 5,160,000; whites, 20,000. L., 12 per cent.; L. M., 4 per cent.; E., 15 per cent.; P. N., 66 per cent.; T., 3 per cent.; 200 counted.

May 8, 8 a. m. Reds, 5,200,000; whites, 17,000. L., 13 per cent.; L. M., 4 per cent.; E., 14 per cent.; P. N., 66 per cent.; T., 3 per cent.; 200 counted.

CASE 3.—M. R.; male Filipino; age 56; native of Albay; well built. Physical examination negative excepting slight enlargement of the right spermatic cord, and small right hydrocele. Right testicle was normal in size and hard. Chills, fever and some headache had occurred at irregular intervals during the past year. Two embryos were found in specimens of blood taken on April 4, 1901, at 11 p. m.; in that on April 6, 9 a. m., two.

On April 18, reds numbered 3,620,000; whites, 8,000 per cm. Differential count: L., 14 per cent.; L. M., 4.5 per cent.; E., 15 per cent.; P. N., 64 per cent.; T., 2.5 per cent.

On April 23, beginning at 2 p. m., hourly counts of the embryos per c.c. and leucocytes per cm. (during day time) and differential counts of the leucocytes were made.

Number of embryos per c.c.:

April 23, 2 p. m., 84; 3 p. m., 0; 4 p. m., 0; 5 p. m., 84; 6 p. m., 84; 7 p. m., 504; 8 p. m., 588; 9 p. m., 1680; 10 p. m., 1596; 11 p. m., 1512; 12 p. m., 1428.

April 24, 1 a. m., 1008; 2 a. m., 1008; 3 a. m., 840; 4 a. m., 672; 5 a. m., 504; 6 a. m., 168; 7 a. m., 756; 8 a. m., 1092; 9 a. m., 336; 10 a. m., 588; 11 a. m., 336; 12 noon, 84; 1 p. m., 0; 2 p. m., 84.

May 6, 336.

May 8, 2 p. m., 0.

On April 23, 2 p. m. Red blood count, 3,552,000. Whites, 7600. L., 19 per cent.; L. M., 3.5 per cent.; E., 6.5 per cent.; P. N., 68 per cent.; T., 3 per cent.; 200 counted.

April 23, 3 p. m. Whites, 8000. L., 15 per cent.; L. M., 3.5 per cent.; E., 8 per cent.; P. N., 70.5 per cent.; T., 3 per cent.; 200 counted.

April 23, 4 p. m. Whites, 8000. L., 19.5 per cent.; L. M., 4.5 per cent.; E., 8 per cent.; P. N., 66 per cent.; T., 2 per cent.; 200 counted.

April 23, 5 p. m. Whites, 6666. L., 20 per cent.; L. M., 3 per cent.; E., 7.5 per cent.; P. N., 67 per cent.; T., 2.5 per cent.; 200 counted.

April 23, 6 p. m. Whites, 13,333. L., 20 per cent.; L. M., 4 per cent.; E., 7 per cent.; P. N., 66 per cent.; T., 3 per cent.; 200 counted.

April 23, 7 p. m. L., 20 per cent.; L. M., 3 per cent.; E., 7 per cent.; P. N., 68 per cent.; T., 2 per cent.; 200 counted.

April 23, 8 p. m. L., 16 per cent.; L. M., 4 per cent.; E., 6.5 per cent.; P. N., 70 per cent.; T., 3 per cent.; 200 counted.

April 23, 9 p. m. L., 23 per cent.; L. M., 3 per cent.; E., 6.5 per cent.; P. N., 64.5 per cent.; T., 3 per cent.; 200 counted.

April 23, 10 p. m. L., 18 per cent.; L. M., 4 per cent.; E., 7 per cent.; P. N., 67 per cent.; T., 4 per cent.; 150 counted.

April 23, 11 p. m. L., 22 per cent.; L. M., 4 per cent.; E., 7 per cent.; P. N., 64.5 per cent.; T., 2.5 per cent.; 300 counted.

April 23, 12 p. m. L., 21 per cent.; L. M., 3 per cent.; E., 6 per cent.; P. N., 65 per cent.; T., 2 per cent.; 150 counted.

April 24, 1 a. m. L., 22 per cent.; L. M., 3 per cent.; E., 8 per cent.; P. N., 65 per cent.; T., 2 per cent.; 150 counted.

April 24, 2 a. m. L., 22 per cent.; L. M., 3 per cent.; E., 3 per cent.; P. N., 65 per cent.; T., 3 per cent.; 200 counted.

April 24, 3 a. m. L., 22 per cent.; L. M., 3 per cent.; E., 6 per cent.; P. N., 67.5 per cent.; T., 1.5 per cent.; 200 counted.

April 24, 4 a. m. L., 19 per cent.; L. M., 3.5 per cent.; E., 8 per cent.; P. N., 67.5 per cent.; T., 2 per cent.; 200 counted.

April 24, 5 a. m. L., 18.5 per cent.; L. M., 4 per cent.; E., 14.5 per cent.; P. N., 61 per cent.; T., 2 per cent.; 200 counted.

April 24, 6 a. m. Whites, 8600. L., 19 per cent.; L. M., 3 per cent.; E., 10.5 per cent.; P. N., 64.5 per cent.; T., 3 per cent.; 200 counted.

April 24, 7 a. m. Whites, 12,000. L., 22 per cent.; L. M., 3 per cent.; E., 12.5 per cent.; P. N., 60.5 per cent.; T., 2 per cent.; 200 counted.

April 24, 8 a. m. Whites, 10,600. L., 25 per cent.; L. M., 4 per cent.; E., 8 per cent.; P. N., 60 per cent.; T., 3 per cent.; 200 counted.

April 24, 9 a. m. Whites, 8600, triple stain. L., 15 per cent.; L. M., 2.5 per cent.; E., 20.5 per cent.; P. N., 60.5 per cent.; T., 1.5 per cent.; 500 counted.

April 24, 9 a. m. Stained with hematoxylin and eosin. L., 11 per cent.; L. M., 3 per cent.; E., 19 per cent.; P. N., 65 per cent.; T., 2 per cent.; 200 counted.

April 24, 10 a. m. Whites, 7000. L., 16 per cent.; L. M., 4.5 per cent.; E., 12.5 per cent.; P. N., 65 per cent.; T., 2 per cent.; 200 counted.

April 24, 11 a. m. Whites, 7600. L., 15 per cent.; L. M., 4 per cent.; E., 15 per cent.; P. N., 64 per cent.; T., 2 per cent.; 200 counted.

April 24, 12 noon. Whites, 8000. L., 16 per cent.; L. M., 4 per cent.; E., 12 per cent.; P. N., 66 per cent.; T., 2 per cent.; 200 counted.

April 24, 1 p. m. Whites, 10,000. L., 14 per cent.; L. M., 4 per cent.; E., 12 per cent.; P. N., 68 per cent.; T., 2 per cent.; 150 counted.

April 24, 2 p. m. Whites, 8000. L., 20 per cent.; L. M., 4 per cent.; E., 11 per cent.; P. N., 64 per cent.; T., 2 per cent.; 200 counted.

May 1, 10 a. m. Reds, 3,289,000. Whites, 14,000. L., 16 per cent.; L. M., 5 per cent.; E., 15 per cent.; P. N., 62 per cent.; T., 2 per cent.; 200 counted.

May 6. Reds, 4,200,000. Whites, 9000. L., 26 per cent.; L. M., 6 per cent.; E., 13 per cent.; P. N., 52 per cent.; T., 3 per cent.; 200 counted.

May 8, 2 p. m. Reds, 3,500,000. Whites, 12,000. L., 20 per cent.; L. M., 6 per cent.; E., 12 per cent.; P. M., 60 per cent.; T., 2 per cent.; 200 counted.

CASE 4.—Blood examinations of Case 4 substantiate the findings of Cases 2 and 3, but add no new facts. No trichinae could be found in a portion of the biceps muscle.

The accompanying chart shows the periodicity of the eosinophilia. This periodicity depends on the periodicity of the embryos in the peripheral circulation as shown by Manson.⁵ He found the embryos clumped together in the large arteries and irregularly scattered through the capillaries during the daytime and in the peripheral circulation during the night. The blood vessels of the lungs seemed to be the favored hiding places during the daytime.

Recent work on trichinosis, ankylostomiasis and the present work⁶ on filariasis show that these parasites have a positive chemotaxis for eosinophiles and that wherever in the body the parasite may be located there eosinophiles will be found.

When the embryos are crowded into the capillaries a local positive chemotaxis for eosinophiles gradually attracts these cells from the general circulation. As the embryos reënter the peripheral circulation this local positive chemotaxis is removed, allowing the eosinophiles to reënter the general circulation. The movement of

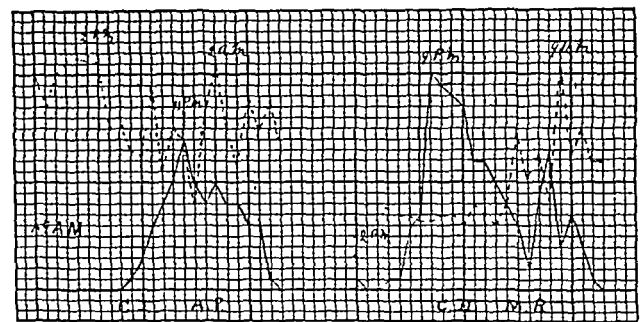
the eosinophiles must be some hours later than that of the embryos.

DESCRIPTION OF CHART.

Each horizontal line represents 84 embryos and 1 percentum of eosinophiles. Each perpendicular line represents one hour of time. In the time indicated by A. P.—from 9 a. m. to 5 p. m.—no embryos were found; during these hours the eosinophilia in the peripheral circulation was greatest; from 5 p. m. to 11 p. m. the number of embryos per c.cm. of blood was increasing, while the eosinophilia was decreasing; from 11 p. m. to 8 a. m. the number of embryos was decreasing and the eosinophilia increasing.

Cases 2 and 3 were recently infected, while in 1 and 4 the duration of the disease could not be ascertained. Cases 1 and 4 did not have trichinosis, while 2 and 3 were not examined. All of the cases show a decided eosinophilia associated with filariasis. In the most recent case, Case 2, the highest eosinophilia was found. In cases of long standing eosinophilia has not been observed.

In the light of the above works it may be stated that during the early stages of filariasis a leucocytosis and eosinophilia are present; that the leucocytosis and eosinophilia are cyclic, following by a few hours the



periodicity of the embryos in the peripheral circulation, and that as the disease progresses the leucocytosis and eosinophilia gradually decrease to normal. As yet the duration of these phenomena have not been determined.

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Why the Yellow Newspaper is Against the Medical Profession.—In his excellent address (*Colorado Medical Journal*, July, 1902) Dr. S. D. Van Meter states that in 1901 the four leading newspapers of Denver received about \$72,000 for advertisements from the illegal and advertising practitioners of the city. And yet Dr. Van Meter says that if any one of these papers would refuse such immoral and indecent advertisements, and would champion the cause of right and public welfare, there would be an instantaneous increase of circulation, as a result of professional influence, that would more than offset the loss of income from the criminal advertising. The problem, therefore, is for the profession and honorable-minded citizens, first, to unite their influence, and then to bring it to bear upon the conscienceless newspaper publisher. The condition of medical progress is thus demonstrated from another side to consist in organization. Let us organize!—*Amer. Med.*

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THE ROLE OF THE TOXINS IN INFLAMMATORY PROCESSES.

The time has probably arrived when the pathologist should insist that the professional gaze shall no longer be directed to pathogenic bacteria as the sole agent in the production of inflammation. For many years we have known that infective alterations in the tissues are not always to be explained by the presence of bacteria, although it is also well established that the initial disturbance is very frequently due to microbial invasion. One of these numerous instances is found in migratory ophthalmia. This example is chosen because it well exemplifies the progress made in very recent times in the domain of bacteriology. The experiments of Harold Gifford, Deutschmann and others have clearly shown that the path of infection in "sympathetic" ophthalmia is along the vaginal canals (and other lymph spaces) of the optic nerve, from the injured and infected eye to the chiasma, thence, by way of the opposite nerve, to the "sympathizing" eye—but, in the great majority of instances where an examination of the uninjured eye was made, no bacteria whatever were discovered. The sympathizing eye was generally found to be "sterile." This fact was variously interpreted by those whose faith in the germ theory of disease was still unshaken. The microbes were destroyed, they said, before the examinations had been made, but after they had reached the second eye and, in some mysterious way, had accomplished their purpose of setting up in it destructive changes closely resembling those seen in the primary lesion. Other observers, feeling this negative evidence insufficient, fell back on the old hypothesis that furnished the early name to the disease, viz., that the irritation of the sympathetic (ciliary) nerves in the injured eye was sufficient to induce a similar form of inflammation in the fellow eye. Those who retained this belief and who, in confirmation of their contention, occasionally found alterations in the ciliary nerves of the sympathizing eye, failed to explain why migratory ophthalmia is rarely encountered except in penetrating wounds of the eye, and why it is particularly to be feared in infected wounds of the principal lymphatic area of the interior of the globe—the region of the ciliary body.

We are now well aware that the second eye is, in all likelihood, poisoned by the toxins excreted by pathogenic bacteria introduced into the "exciting" eye.

Doubtless the time is not far distant when chemical reagents (and not the microscope hitherto relied on) will not only demonstrate the presence of these alkaloidal poisons in the "sympathizing" eye, but will reveal the name of the bacterium or bacteria that originally furnished them. This probability, as well as other questions regarding the part played by toxins in the production of inflammation, has, relatively, been little discussed. Strange to say, also, among the numerous elaborate, exhaustive and original investigations in bacteriology comparatively little has been done for what might be called bacterial toxicology. A sufficient reason for this lies, perhaps, in the marked instability of the toxins, their complex composition, the ease with which they form new combinations and the obstacles that oppose their isolation or classification. With few exceptions we have no reliable chemical tests for them, and have mostly to rely on their biologic reactions and relations.

No better exposition of the part played by toxins in inflammatory lesions has so far been published than the essay to which was quite lately awarded the Boylston prize.¹ This was prepared by Dr. Robert L. Randolph, who took as his experimental territory the rabbit's eye, using on it the following bacteria and their toxins: the *Gonococcus*, *Koch-Weeks bacillus*, *Bacillus diphtheriae*, *Staphylococcus aureus*, *Pneumococcus*, *Micrococcus epidermidis albus*, *Streptococcus pyogenes*, *Bacillus coli communis* and the *Bacillus xerosis*. Randolph reminds us that experiments with the three bacteria first mentioned, as well as with the Morax-Axenfeld diplobacillus, are beset with many difficulties because they produce little or no reaction in the conjunctiva of animals, inasmuch as that membrane does not furnish a proper soil for their growth.

The work is divided into four parts; first, the study of the effect produced by toxins when they are instilled into the conjunctival sac; second, the results following their injection beneath and into the tissues of the conjunctiva; third, the effect produced by their introduction into the anterior chamber, and fourth, as an adjunct to or as a complementary study of the foregoing, the bacteriology of the normal conjunctiva of the rabbit, based on an examination of forty-seven cases. Forty experiments, recorded under the first heading, demonstrate that mere contact of bacterial toxins with the normal conjunctiva of the rabbit produces no local inflammation or other injurious effect on that animal. Randolph justly claims that his experiments are the first to demonstrate that, unlike alkaloidal and many other poisons, these chemically undefined toxins, excreted by bacterial cells, in common with similar poisons produced by certain cells of the higher order of plants, notably ricin and abrin, and of some animals, snake venom for example, are, as a rule, incapable of absorption by

1. Am. Jour. Med. Sci., November; See THE JOURNAL, Nov. 22, p. 1349, Abstract 60.

intact mucous surfaces. They demonstrate how very important it is to preserve the epithelial integrity of absorbing membranes against those poisonous agents that lie in wait to invade the organs they cover and protect. He does not attempt to prove or disprove Ehrlich's "side-chain" theory of infection, but he does assert that the primary and essential damage to the rabbit's conjunctiva, in the presence of pathogenic bacteria and toxins, is produced by the latter. If the bacteria are secondarily active during the infective process it is because the soil has already been prepared for them by the changes first wrought in the cells and tissues by the toxins. These contentions are further fortified by the numerous experiments included under sections 2 and 3. Randolph is able to show that bacterial filtrates from both old and young cultures contain irritative poisons that promptly set up local inflammatory changes when injected into the substance of the conjunctival mucous membrane. This is especially true of the toxins secreted by the gonococcus, the colon bacillus, the diphtheria bacillus and by all the pyogenic cocci. On the other hand, control injections of the uninoculated culture media, in larger doses, produced no effect.

It was not surprising to find, after the results obtained by intraconjunctival injection of the toxins, that unequivocal reactions follow their introduction into the anterior chamber of the eye. Filtrates were employed in these experiments, not only from bacterial cultures already known to produce powerful toxins, but also from some others not before shown, by the biologic tests, to secrete active, soluble toxins. In every instance Randolph was able to demonstrate that the intraocular (especially the intraconjunctival) reaction is more delicate than the usual antiserum or other biologic test in determining the presence or infective quality of the various toxins. That the toxins concerned are not simply the "bacterio-proteins" of Buchner, derived from macerated and degenerated cells, is proved by the use of young cultures only. The conjunctival sac of the rabbit's eye, as in the human organ, was found to harbor numerous bacteria, pathogenic and harmless, and there is reason to believe that both in man and in the lower animals these vary from time to time as to number and pathogenic quality.

The "practical" conclusion to be drawn from this work has long been known to us; we are comparatively safe from microbic invasion as long as the protective epithelium that covers our bodies and lines our canals remains intact. For example, mere rubbing of an eye into which a cinder or other foreign body has flown may result in its destruction from spreading ulcer of the cornea due to infection of the abraded spot from otherwise harmless colonies of the pneumococcus. May not this statement also hold good of bacteria in the pulmonary, intestinal and genito-urinary tracts? On the other hand, the precise character of the infective injury and our knowledge of the agents that produce it are more

clearly defined than ever before from the painstaking investigations of Randolph.

THE PATHOLOGY OF CONVULSIVE DISORDERS.

The careful and systematic study of any one of the chronic convulsive disorders is certain to throw much light on all. The problem of discovering their nature and pathology must rest largely in the future on the correlation of such studies. The gradual change of the location of the lesion of convulsive diseases from the muscle, peripheral nerve, medulla and basal ganglia to that of the cerebral cortex has been brought about largely through detailed studies on isolated cases.

It is of particular interest to note that much of the newer work on the pathology of many so-called functional disorders, such as epilepsy, chorea, convulsive ties, myoclonies and the like, brings them more nearly to a common pathology and pathogenesis; that is, to an organic basis with a definite cortical lesion, degenerative in type. This has been well shown in the work of Clark and Prout¹ on status epilepticus, and still more recently on the association disease myoclonus-epilepsy.² The article consists of a careful review of the causes, symptoms, prognosis, pathology and treatment of the disease with the additional report of three new cases which, with one previously reported by Clark, constitutes the only ones on record at present in the English language. The authors summarize the gross pathologic lesions in the associated disease which have been found by previous workers to be slight meningitis and accumulation of cell elements about the vessels and ganglion cells, with some increase of the interstitial tissue products, often seen in degenerative processes of the brain and meninges—findings that throw but little light on the real pathogenesis of the disease. In one case of their own, examined under what are considered at present ideal conditions, the authors report definite and marked histopathologic changes.

"The characteristic lesion of epilepsy in the second or so-called sensory cell was found. This consisted in a destruction of the intranuclear network and its replacement by a granular substance. As a consequence of this change in the cell body abstraction of the nucleolus from the cell occurred easily and frequently in cutting the section. In addition to the epilepsy lesion which was found and conclusively proven to be present in various forms and conditions of the disease, identical cell destruction was found in the large pyramids of the third cortical layer. The large chromatic granules of the Betz or motor cells of the paracentral lobule were quite as much involved as the chromatic substance in the cells of the smaller type. Chromatolysis was extreme over the entire cortex. The general distribution of the lesions was striking; chromatolysis, absence of the nuclear membrane and the presence of granular and swollen nuclei, in every portion of the cortex examined.

1. Proceedings of the N. Y. Neurological Society, October, 1900.
2. American Journal of Insanity, vol. lxx, No. 1.

It is essential to recognize that in these findings we have the lesion of epilepsy of the second layer cells, plus a maximum intensity of the same form of cell death in the large pyramidal cells of the third layer. Presumably the latter changes underlie the myoclonic spasm. The two diseases have a common soil of degeneracy, which is expressed in an organic cellular anomaly of the second and third layers of the cortex. This anomaly, constituting the predisposition, manifests itself at the supererogation of an immediate excitant in epilepsy and myoclonus. However, additional evidence of the constancy of the lesion supposed to underlie the myoclonus is very important and necessary. If the primary lesion is in the cerebral cortex and involves the autonomy and life of sensory and motor cells in the same death process, we must infer that the excitant is probably a general toxic or autotoxic agent, acting in a uniform manner on these particular cells. As before pointed out, the soil for the implantation of the association disease is so remarkably degenerative that the intoxication may be slight and transient only. It will be, therefore, doubly difficult to detect."

In a final conclusion the authors say "that the lesion of myoclonus epilepsy appears to be in the cerebral cortex involving the nucleus and the intranuclear network of cells of both sensory and motor types. Its pathogenesis appears to be an intoxication or auto-intoxication of these cortical elements, probably brought about by a faulty chemotaxis of these same cells because of an inherent organic anomaly. While each condition maintains its separate morbid entity the two are closely allied, and indeed are often found as indissolubly associated clinically and pathologically as are the motor and sensory functions of the cells they involve."

For years Chaslin, Féré, Marinesco and Binswanger have urged gliosis as the essential lesion of the epilepsies and, in point of fact, for all chronic convulsive disorders. The glial changes show themselves as a sclerosis of different cortical areas, especially of the cornu ammonis. But it now appears that such lesions are a result and not the initial or progressive part of the cortical lesion. From a pathologic standpoint it has long since been recognized that primary interstitial change in any tissue is steadily growing rarer. Primary connective tissue changes are almost unknown in the pathology of the nervous system. It does not seem, therefore, illogical that the initial parenchymatous change in the epilepsies should be insisted on by Clark and Prout. As these writers contend, it is quite possible that the earliest lesion of the cortex in epilepsy and allied convulsive disorders is one of destruction of the cell elements brought about by autotoxic agents, the ultimate result of which is a progressive glial replacement and overgrowth.

TREATMENT OF INOPERABLE MALIGNANT DISEASE.

The results of operative treatment of malignant disease, even under the most favorable conditions, are on

the whole so discouraging that it is not surprising that cases which are clearly thought to be inoperable are frequently neglected. The large number of patients who fall a prey to quacks because of such neglect makes it the imperative duty of a practitioner to try every known means of alleviation, if not of cure, for these distressing cases. Means which have been employed with more or less success are numerous. Coley's serum is among the best known of such curative agents, and has undoubtedly cured a number of cases of spindle-celled sarcoma. It has not proved of any value in the treatment of carcinoma or of most other forms of sarcoma, and like other means of this kind should not be employed except in inoperable cases. Oöphorectomy in cases of carcinoma of the breast, as suggested by Beatson of Glasgow, has also proved a successful means of treating a small number of cases. The proportion of cases influenced by such treatment is very small, however, and it can not be relied on either as curative or palliative in any given case.

The latest addition to our therapeutic resources in such cases is the *x*-ray treatment. A discussion¹ on the use of the *x*-ray took place at the last meeting of the British Medical Association. Mr. Thomas Bryant of London reported two cases of recurrent carcinoma breast in which the disease was apparently arrested by the use of the *x*-rays, as well as some cases of rect carcinoma which were benefited. Several others who took part in the discussion also reported favorable results from the use of the *x*-rays. The successes of several workers with the *x*-ray in this country are well known. The favorable results from all of these methods have been far too frequent to be due to chance, spontaneous cure, or errors in diagnosis, although the cures are so comparatively few in number that one would not be justified in advising any of these methods in truly operable cases. We say this in spite of the encouraging outlook in the use of the *x*-ray. Beatson spoke favorably of the use of thyroid feeding in connection with oöphorectomy, and Boyd has reported 17 cases in which the course of the disease was favorably influenced when this method was employed.

Among other measures, Adamkiewicz has used an aqueous solution of neurin citrate, which he calls cancroin, and reports² 6 cases which appeared to have been cured by this method. The results of cancroin treatment in the hands of others have not proved very satisfactory. Two years ago Vlaieff introduced a serum which he obtained by inoculating geese with cultures of blastomycetes derived from human carcinoma. The injections caused no risk to life, and he reported some cures from its use, but the investigation committee of Harvard Medical School reported negative results in both animal inoculations and cultural experiments with human carcinoma.

1. British Medical Journal, 1902, vol. II, pp. 1293-1307.
2. Berliner Klin. Woch., No. 24, 1902. See also THE JOURNAL, Aug. 16, 1902, p. 405, 491.

Besides curative means, much can be done with palliative measures in these cases. The relief of foul-smelling discharge by curetting or the use of the actual cautery and tamponing is often very great. Czerny even reported to the German Surgical Congress, 1900, a few cases which had been pronounced inoperable, but which were cured by excision or curettement and the use of 30 per cent. zinc chlorid solution. As a palliative measure the ligation of a main artery may be considered. Occasionally so much shrinkage of the growth occurs after ligation that radical operation is possible and hemorrhage can at least be prevented in this way. Formalin, arsenic pastes, iodid of potassium, injection of alcohol, electric treatment and many other measures have been used with more or less success and have their advocates. Although such means are not likely to give very brilliant results, there seems to be no reasonable objection to trying them, particularly in cases in which patients have heard of their value and desire to try them.

With few exceptions all attempts to cure malignant diseases by means other than early and free operation have hitherto proved almost invariably futile, but we believe that inoperable cases can be handled more successfully as regards the relief or possible cure of the patient by regular practitioners of medicine than by quacks. Those who are persevering in the treatment of such cases will undoubtedly be occasionally rewarded by obtaining a cure. Such cases should certainly not be allowed to fall into the hands of quacks, who most frequently extort exorbitant sums of money and only add to the sufferings of the patient. The active investigations which are being made in so many different countries as to the cause and nature of carcinoma seem more likely to lead to means of prevention and cure in such cases than any treatment which is at present known.

OSTEOPATHIC LAW.

A Missouri judge has recently given a medicolegal decision that it seems to us will hardly stand the revision of the higher courts. It is in effect that in cases of malpractice the testimony only of physicians of the same alleged school of practice as the medical party in the case can be accepted. The case in court was one against one of the osteopathic Stills of Kirksville, Mo., and the judge ruled that the study of one school of medicine did not qualify a practitioner to give an intelligent opinion on the work of one of another school. Osteopathy is thus impregnably fortified by this Missouri decision as long as it stands, a fact that is worth advertising for the benefit of those who may propose to submit themselves to osteopathic massage. If they do not get satisfaction from the operation or treatment they need not expect to get any more from this judge or other Missouri judges who, like him, stand up for the institutions of their state. Another osteopathic decision is reported as handed down by a Colorado judge, who decides that the osteopaths have a right to advertise

themselves as doctors and to practice independent of any restrictions by the state law. This, we understand, is also a lower court decision, and may be revised. If not, a little more legislation is required in Colorado.

THE USELESS CORONER.

The movement to abolish the office of coroner in New York seems to be one that ought to receive the general support of the profession. The office is an antiquated one that has survived its usefulness and really only exists as a political plum; its judicial functions could be better exercised by other officials provided for by law, and its medical duties would be much more satisfactorily attended to by medical men without interference by laymen or subordination to politicians. The name of the office is itself an anomaly in a republican government, and it is a little remarkable that it has been so long endured, when its imperfections were a matter of satire and ridicule even in Shakespeare's day. The experience of Massachusetts has shown the needlessness of the office, and it is the more surprising that the common sense of other commonwealths has not before this induced them to follow her example in abolishing it. If it is, as is stated, not a constitutional office in New York, its abolition ought to be an easy matter; some other states are probably not so well off, and will have to endure this expensive relic of monarchical barbarism the longer. The action in New York, however, will be a stimulus to reform in this matter elsewhere.

MUSIC AND SCIENCE IN TUBERCULOSIS.

Down in Missouri they have novel methods of prophylaxis. Music of a certain kind has been found to drive away its hearers, but the use of this means to expel the bacilli of tuberculosis is, to say the least, unique. In Holy Writ we are told that devils were cast out by adjurations; and various savage tribes use tom-toms and other barbaric musical instruments to exorcise demons and thereby cure disease; it remains for Missouri, however, to combat dread tuberculosis by a judicious combination of useful information and music. At the first public meeting of the Missouri State Society for the Prevention of Tuberculosis in Kansas City, December 2, the program appropriately began with Mendelssohn's Wedding March, followed by an address on "The Necessity of the Movement." Relief was then afforded by two songs, "I Love Thee" and "The Violet." "The Necessity of Registration" was next discussed, after which a quartette sang the "Spring Song" and "Oh, Hush, Thee, My Baby." After an article on "The Danger in Our Schools from Consumption" a Chopin polonaise was played, supposedly to relieve the tension. The next address on "Contagiousness of Consumption" was gruesomely followed by a song "Till Death." And so the program went on with sandwiches of science and art. The report is incomplete, as it does not detail the effect of the alternate mental strain and relaxation on the audience. It would be interesting to contemplate the effect if such an innovation were made to relieve the strenuousness of the programs of some of our solid, not to say stolid, medical society meetings.

VALUE OF VIVISECTION TO BRAIN SURGERY.

Dr. Keen sets a commendable example by publishing direct and striking evidence of the value to man of animal experimentation. Senator Gallinger holds a medical degree (Homeopathic), and probably this is why he has been selected to represent the antivivisection cult in the Senate. To him Dr. Keen addressed the letter which is published elsewhere,¹ describing a case cured by an operation, the success of which was made possible through knowledge obtained from experimentation on animals. It is only one concrete example of what is occurring constantly wherever medicine is practiced. Midshipman Aikin recently sustained at Annapolis an injury to the head while playing football. No fracture of the skull could be found, but there was visible a slight bruise at the outer end of the left eyebrow. Soon after the accident he became unconscious, but later slightly rallied and complained of bad frontal headache. Soon after this he began to develop convulsions, and within six and one-half hours had clonic spasms of the right arm twenty-four times—a bad outlook for the patient. The physicians and surgeons of this country could in a year's time furnish Senator Gallinger with hundreds, if not thousands, of cases as conclusive as this, in which lives have been saved as a result of knowledge obtained from vivisection. In order that public opinion may be educated in this regard, it is important that some of the constantly occurring cases should be thus given to the public.

IDENTIFICATION BY PALM AND SOLE PRINTS.

A number of observers have recently called attention to the fact that the finger prints of different individuals are perfectly characteristic and that they may be used as a means of identification. Francis Galton has studied the subject most elaborately, and his books on "Finger Prints" and "The Decipherment of Blurred and Indistinct Finger Prints" are well known to those interested in such matters. Prof. H. H. Wilder² of Smith College again calls attention to this subject and gives some interesting data as regards the prints from the sole of the foot as well as from the palm of the hand. He mentions recent interesting studies made by Colonel Mallory of the United States Bureau of American Ethnology, who has found scratchings on the slaty rocks near Lake Kejienkoojic in Nova Scotia, which are supposed to be the work of aboriginal Micmac Indians and date back to pre-Columbian times. These scratched drawings of the lines of the palms and soles show a remarkable degree of detail which must have been the result of unusually careful observations. The scratchings on the tip of the fingers have also been interpreted as either indicating walking pads or it has been suggested that the reason that they have been used is the idea of some primitive people that originally each part of the body terminated in an organ of sense, particularly an eye. From this was supposed to result the fancied resemblance between the shape of the pattern and the eye. One of these explanations seems more likely than that the aborigines were really careful students of palmar and plantar prints. A study of the prints from the

sole of the foot leads Wilder to believe that the sole prints are as characteristic in their patterns as are the prints of the palms, and he suggests that in the majority of cases even a cursory study of the main lines and areas of prints of the soles and palms would be sufficient to identify an individual. This might be made use of, he believes, as a means of identification, which would be a very practical extension of the Galtonian system. Such a system of identification by prints would be useful in the numerous cases in which identification of the body living or dead becomes a matter of importance for whatever reason. There are countless cases of this kind in which identification is a matter of doubt and uncertainty and great expense is involved. The system, Wilder believes, would prove a better and surer guide than the usual rogues' gallery photograph or even a set of Bertillon measurements. It would be available in many cases in which from accidents of various sorts bodies are mutilated so as to render recognition very difficult.

Medical News.

DISTRICT OF COLUMBIA.

Morbidity and Mortality of the District.—The cases of typhoid fever have now fallen below 300. During the week ended November 22, five deaths were reported from typhoid fever. The total mortality for the week showed a decrease of 20 per cent. as compared with the preceding week. The deaths for the week numbered 91, equivalent to an annual rate of 16.2 per 1000.

Resolutions Regarding Dr. Reed.—The faculty of the Columbian University has passed resolutions regarding the death of Dr. Walter Reed, U. S. Army, professor of bacteriology and pathology in the medical school of that institution.—At a meeting of the student medical officers, U. S. Army, class of 1902-1903, November 26, resolutions were adopted expressing the great sorrow of the members of the class for the sudden and untimely death of their beloved professor and associate, Major Walter Reed, surgeon, U. S. Army.

Change in Emergency Hospital Rules.—Members of the board of directors of the Emergency Hospital accepted an interpretation of the rules of the institution at a meeting held recently, which will work a marked change in the administration of the hospital. Hereafter the executive officer of the institution will not have authority to discharge the resident physician or either of the two assistant resident physicians. The new interpretation of the rules provides that the entire board of directors must act in charges preferred against physicians and take action leading to their dismissal.

ILLINOIS.

Coroner's Cases in November.—Of the 229 cases passed on by the coroner in November, 36 were suicides; 31 deaths were due to railway accidents; 26 to falls; 16 to alcoholism, and 13 to burns.

Isolation Hospital at Parental School.—An isolation hospital for the temporary shelter of pupils afflicted with contagious diseases will be built at the parental school at a cost of \$3000, an appropriation for this purpose having been made, December 5, by the buildings and grounds committee of the Board of Education.

Decision Against Dr. Neely.—On December 3, Judge Dunne directed that the temporary injunction issued in the case brought by Adolph Ender to restrain the president of the county board and the county clerk from signing warrants for the payment of salaries to Medical Director John R. Neely be made permanent. He declared the Cook County Civil Service Commission should have made the examination of applicants for this position a promotional one instead of original. He further declared that the evidence showed that a promotional examination could have been held for the office of medical director, as there were several physicians in the same class with Dr. Neely. An appeal from the ruling will be taken to the upper courts.

1. See page 1537.

2. Popular Science Monthly, November, 1902.

Chicago.

Alleged Licenseless Practitioner.—Mrs. Mary L. Lambert was arraigned, December 1, on the charge of practicing medicine without a license. After the preliminary hearing, the case was continued by agreement.

Extension of Presbyterian Hospital.—The Presbyterian Hospital has bought two residences on Ashland Avenue and Congress Street, for \$40,000. They will be remodeled immediately, and will be opened, January 1, as a home for nurses connected with the hospital.

Personal.—Dr. Albert H. Hoy and family have returned to Chicago, after an absence of eighteen months abroad.—Dr. Otto T. Freer has opened an office in the Venetian Building.—Dr. James B. Herrick has been appointed to the department of internal medicine, and Dr. John E. Rhodes to the department of laryngology in St. Mary's of Nazareth Hospital.

The Week's Deaths.—The total deaths—528—last week are 80 in excess of those of the previous week and the indications now are that the total deaths for the year will be fully 1600 more than the number for 1901. This will give an annual death rate of about 14.30 per 1000 of population for 1902, as compared with 13.88 for 1901—an increase of 3 per cent. The diseases chiefly threatening the public health at the present time are pneumonia and influenza. This latter disease, although prevalent since the early fall, has thus far been of a mild type, but there are indications of a growing virulence of the germ during the past fortnight.

No Insusceptibility to Vaccination.—The chief medical inspector, Dr. Spaulding, in the health board's bulletin, says:

Several times recently attention has been called to a false impression concerning insusceptibility to vaccination held by many persons and even by some medical men. They argue that because a child has had six or seven attempts at vaccination, without its "taking" that the child is insusceptible to the operation, and have asked permission for such child to enter school without the required certificate. They have even come with a letter from the family physician, stating that a given child is insusceptible. It should be clearly understood that no one is insusceptible to vaccinia or vaccination. One successful vaccination can be secured in every person; to this there is no exception. Repeat the attempt until it does "take."

A striking and hideous illustration of the evils of teaching insusceptibility to vaccination was furnished during the week in the neighboring town of Hammond, in which a cashier in the bank was stricken with smallpox in its worst form. He died on the seventh day of the attack with hemorrhagic smallpox. He had had four attempts at vaccination, and because it did not "take" was told he was insusceptible to vaccination—a bit of medical advice which cost him his life at the age of 33—an utterly needless loss of a life useful to the community and of priceless value to his family.

IOWA.

Alleged Illegal Practitioners.—Bruce Gardner, Davenport; A. E. Porter, Fort Madison, and Dr. Rae, Estherville, have been arrested on the charge of practicing medicine without a license.

Bill of Sale Filed.—A bill of sale was filed, December 1, conveying the property of the *Iowa Medical Journal* from E. G. Ragsdale to the Dorr Investment Company, Des Moines, for a consideration of \$2000.

In Memoriam.—In memory of Mrs. Henrietta W. Dows, St. Luke's Hospital, Cedar Rapids, is to be given a complete surgical department, consisting of three rooms and a corridor, thoroughly equipped, by Hon. S. L. Dows and children.

Personal.—Dr. Grant J. Ross, Sioux City, has been appointed a member of the Woodbury County Board of Insanity Commissioners, vice Dr. Van Buren Knott.—Dr. C. D. Harlan, Clarinda, a member of the staff at the State Hospital, has accepted an instructorship in surgery in the State University, Iowa City.—Dr. William S. Lessenger, Mount Pleasant, has been elected vice-president of the Southeastern Iowa Medical Association.—The office of Dr. George Inglis, Monticello, was destroyed by fire, November 30.

MARYLAND.

Baltimore.

Personal.—Dr. Martin B. Billingslea is very ill with a carbuncle on his neck.—Dr. Peter H. Reiche is recovering from an attack of pneumonia.

Detention House Leased.—The health department has leased a detention house for smallpox suspects or those who have been in contact with smallpox cases. Genuine smallpox cases found in the city will, however, be sent at once to quarantine.

The Fight Against Smallpox.—The health board has expended \$5700 of the \$10,000 appropriated to its use at the beginning of the year for the purpose of combating smallpox. The

success in preventing its lodgment here to any considerable extent is most praiseworthy.

In Memory of Professor Friedenwald.—A memorial meeting in honor of the late Prof. Aaron Friedenwald was held at the College of Physicians and Surgeons, December 2. Addresses were delivered by Drs. William Simon and John Ruhrah. Appropriate resolutions were offered by Dr. George J. Preston of the faculty.

Death and Disease.—The health department reports measles still increasing; 247 cases were reported last week, although the type is mild. There were 186 deaths, a death rate of 17.23 per 1000 per annum. From pneumonia 20 died; from bronchopneumonia, 7; from bronchitis, 6; from typhoid fever, 3; from measles, 2; from consumption, 7, and from diphtheria, 1.

Magness Forfeits Bond.—News has been received from West Virginia that Dr. Thomas H. Magness has forfeited the bond of \$500 given by his attorney to secure his appearance to answer the charge of taking the state medical examination in the name of David R. Shepler and swearing falsely to his identity. It is said that the warrant for Dr. Magness was lost or stolen, and that the State Board of Health of West Virginia will institute an inquiry into the case and prosecute the guilty party.

Lorenz in Baltimore.—Dr. Adolf Lorenz arrived, December 6, and became the guest of Dr. R. Tunstall Taylor, surgeon-in-charge of the Hospital for Crippled and Deformed Children. He delivered a lecture in the anatomical hall of the University of Maryland, and demonstrated his method of reducing congenital hip dislocation on a little girl. On Sunday he visited the Hospital for Crippled and Deformed Children, and on Monday visited the Johns Hopkins Hospital and left for Philadelphia the same afternoon.

Medical Colleges.—According to the new register of the Johns Hopkins University, just out, there are 69 professors and instructors in the medical department; 258 medical students, and 72 physicians attending special courses. The number of matriculates in the University of Maryland School of Medicine this year is 300. The Baltimore Medical College has about 425 students. The College of Physicians and Surgeons about 325, and the Maryland Medical about 200. The Woman's Medical College has a very small class.

NEW YORK.

Smallpox in Rochester.—On November 29 there were 122 smallpox patients in Hope Hospital, Rochester.

Consumption Among Convicts.—Superintendent of Prisons Collins will report to the next legislature surprising results of the scientific care of consumptive criminals. The large death rate in the prisons previous to the past few years was due mainly to consumption, and to minimize, if possible, this condition, Superintendent Collins has had all consumptive prisoners sent to the state prison at Dannemora, in the Adirondacks, one of the best places in the world for the treatment of the disease. Here the consumptives were subjected to a special treatment in the prison hospital, with the result of an estimated decrease in the death rate from this cause of 71 per cent. in the past five years compared with the five preceding years.

The Care of the Insane.—Important conferences under the direction of the State Commission in Lunacy have been held during the present week in the pathologic institute on Ward's Island, New York. The newly-chosen director, Dr. Adolf Meyer, has delivered a series of lectures on the scientific treatment of the insane, which have been attended by all the superintendents of the state hospitals and other interested scientists in this and other states. President Peterson of the commission has united with Director Meyer in urging that still greater attention be paid to the acute insane admitted to the state hospitals, and the commission believes that a fresh impetus to the study of causation as well as treatment will result from the conferences.

New York City.

Acid Fumes in Cars.—For a long time the fumes from the storage batteries in certain electric cars have caused discomfort and ill health among passengers. The board of health has taken a firm stand against the nuisance, and the car company has yielded to the pressure by fitting up several cars with a device, suggested by Dr. Hudson, for carrying the acid fumes some distance above the roof of the car. This arrangement is said to operate very well.

Personal.—Dr. Otto H. Schultze has been appointed coroner's physician, vice Dr. Hamilton Williams, resigned.—Dr. Philip F. O'Hanlon has been confirmed as coroner's physician.

—Dr. Jesse P. Duryea, who has been general medical superintendent of the King's County Hospital and Almshouse since 1898, resigned, December 10. At a farewell reception to Dr. Duryea, December 3, he was presented by the employes of the hospital with a diamond ring.

New Plans of Health Department.—One of the most important of the new plans involves the establishment of an East Side branch of the health department that, the commissioner promises, is to be in working order by next March. It will be open day and night, to attend to vaccination, and will have a complaint bureau and a place for the issuance of certificates to relatives and friends to visit patients in the public hospitals, thus sparing residents of the district the necessity of making the long trip to the head office.

Medical Supervision of the Isthmian Canal.—The New York Academy of Medicine, in view of the demonstrated ability of proper sanitary measures to control malaria and yellow fever, has adopted a resolution, declaring that the amplest powers should be given to the medical officer in charge of the sanitation of this canal, calling the attention of the President of the United States to this fact, and asking that the President, as the one authorized to appoint the commission, see to it that the medical officer be made a member of this commission.

Alleged Death from Tetanus Following Vaccination.—On November 30 a boy living in the borough of the Bronx died from what is reported to have been tetanus. The parents allege that the boy was vaccinated, November 19, by one of the physicians of the health department, and that within twenty-four hours the boy began to complain of muscular pains. If this statement is correct, of course the vaccination can not be held responsible. It is also reported that at the same time a servant in the family was vaccinated. The case is being investigated by the board of health.

Typhoid Prophylaxis.—A committee has been appointed by the New York German Medical Society, consisting of Drs. Abraham Jacobi, Isaac Adler, George W. Jacoby, Richard Stein, Leonard Weber and Fritz Schwyzer to make suggestions regarding the prophylaxis of typhoid fever. After enumerating, in a letter to the mayor, board of health and aqueduct commissioners, the ravages of the disease in New York, the committee calls attention to the following important suggestions: Care in supplying good drinking water; enlightening the public; bacteriologic control of ice and oysters, and supervision of public closets.

Foot and Mouth Disease.—The health department of New York City has issued the following order: "All cars bringing cattle from New England states or from any part of New York State shall be accompanied by a sworn certificate stating that the car has been properly disinfected. On the absence of such certificate or on the declaration of this department that it has reason to believe that such disinfection has not been properly carried out, it shall be within the discretion of this department to order that cattle conveyed in such cars shall not be permitted to enter the stockyards of this city, but shall be ordered at once to a slaughter-house for immediate slaughter."

Buffalo.

Personal.—Health Commissioner Greene and City Bacteriologist William G. Bissell are attending the meeting of the American Public Health Association at New Orleans.—Dr. Jacob M. Krause has returned from Denver.

Exposure of an Impostor.—The *Buffalo Review*, a morning daily paper, deserves the appreciative thanks of the laity and medical profession of Buffalo for its exposure of an individual calling himself "Antonius the Boy Wonder," who practices magnetic healing and absent treatment on the poor and unwary. This journal states that Antonius is a faker, and many instances are given of his deception of poor cripples and the methods he employs of obtaining money from those least able to pay. This individual has been driven out of many cities, but because of the inactivity of the district attorney's office he has been allowed to remain in Buffalo.

PENNSYLVANIA.

Personal.—Dr. James V. Harsha, acting city physician of McKeesport, has resigned, and Dr. Frank John was elected in his stead.

Typhoid at Monessen.—An epidemic of typhoid fever prevails at Monessen. The cause is supposed to be contaminated well water.

Hospitals for Epileptics and Criminal Insane.—The State Board of Charities has decided to ask the state legislature for appropriations for the erection of a hospital for epilep-

tics and a separate institution for the criminal insane now confined in the state penitentiaries.

Urges Extension of Sewer System.—At the monthly meeting of the Reading Medical Association resolutions were adopted recommending that the city authorities take such necessary steps to extend the house sewerage system that all parts of the city may be included.

Philadelphia.

The University Day Oration.—Dr. S. Weir Mitchell has accepted an invitation from the board of trustees of the University of Pennsylvania to deliver the University Day Oration at the yearly commemoration of Washington's birthday.

Clinic for Children.—A clinic for children, including a nursery for motherless infants, has been established at the Jewish Maternity Hospital. Dr. I. Valentine Levi is in charge of the department, and Dr. Eleanor C. Jones is consulting pediatricist to the new department.

Illness and Death.—For the week ended December 6, 129 new cases of typhoid fever were reported, with 8 deaths. Six new cases of smallpox were reported, with one death. There were 450 deaths from all causes, a slight excess over the number for the corresponding week of 1901. There are said to be about 1200 patients at present under treatment for typhoid fever.

Abolition of Board of Charities and Correction.—Dr. John V. Shoemaker, president of the board of charities and correction, will, in his next annual report to the mayor, recommend abolishment of the board, and that the charities be placed under a commissioner and the house of correction in the department of public safety. The recommendation is one result of a visit made by the board to the public institutions of New York. The departments of charities and corrections in the latter city are presided over by commissioners who give their whole time to the work and are salaried officers. The inmates are also required to work. Neither of these conditions prevails in Philadelphia.

GENERAL.

Cholera is estimated to have cost 126,000 lives in the Philippines out of 208,000 cases thus far.

Southern Pacific Hospital Car.—This road is to have a car completely furnished as a hospital on wheels, with headquarters at Houston, Tex. The equipment includes an operating room.

Will Call Plague Conference.—Surgeon-General Wyman of the U. S. P. H. and M.-H. Service is reported to have said he would soon call the convention of all state boards of health that several of them have asked for.

"Dixie" To Be Hospital.—The Navy Department has approved the remodeling of the *Dixie* into a hospital ship. She will be only one of her kind. The complete overhauling and refitting will cost nearly a quarter of a million dollars.

Hawaiian Lepers Captured.—Three lepers, who have lived in the mountains of Hawaii and subsisted on the results of depredations, have at last been captured. They had all approaches under observation and were warned by friendly natives whenever attempts were made to find them. They were captured by a ruse. It is reported that two others are hidden in the same locality.

Many Deaths on Lakes.—The season of 1902 records 140 deaths on the great lakes, an increase over all previous years; 53 sailors went down with their ships, 47 men fell overboard and were drowned, and 15 lost their lives in collisions. Lake Erie was the grave of 59; Superior, 40; Michigan, 14; Huron, 22; Ontario, 54; the Detroit and St. Croix rivers, 10. The total loss of life on the lakes for each of the past seven years is as follows: 1896, 66 deaths; 1897, 88; 1898, 95; 1899, 100; 1900, 110; 1901, 132; 1902, 140.

Many Hawaiian Licenses Void.—Because of errors in office by former Treasurer W. H. Wright, twenty-nine physicians of Hawaii, sixteen of them Japanese, must pass new examinations. The chief error was in allowing a board of examiners to hold office for three years instead of two, as the law provides. During the unlawful period the board of medical examiners was out of harmony with the board of health. One disputed point was the admission of Japanese to practice and the requiring them to be examined in English. As the board of health favored a more rigid examination and was overruled by the examiners and the treasurer, the new examinations are expected to be more severe, and several Japanese have applied for an injunction against the loss of their present licenses.

Gibbs Memorial Prize.—The New York Academy of Medicine will award \$1000 to the author of the best essay on "The Etiology, Pathology and Treatment of the Diseases of the Kidney," presented by Oct. 1, 1904. Essays must be in English, typewritten, designated by a *nom de plume*, accompanied by a sealed envelope bearing the same *nom de plume* and containing the name and address of the author. No envelope will be opened except that of the successful author. There will be no award if no essay shall be deemed worthy. Unsuccessful essays will be returned if claimed within six months. An essay must show originality to obtain the prize. Members of the regular medical profession of the United States may compete. The original of the successful essay shall be the property of the academy, and will be published in its transactions. Essays should be sent to the Committee of the Trustees of the New York Academy of Medicine on the Edward N. Gibbs Memorial Prize, 17 West 43d Street.

CANADA.

The Royal Victoria Hospital, Montreal, reports for the month ending November 30: Patients admitted during the month, 248; discharged, 252; died, 8; highest number on any one day, 207; patients under x-ray treatment daily, 22; ambulance calls, 32; visitors to the wards, November 23, 408.

The Montreal General Hospital reports for November 251 admissions; 241 patients discharged; 23 died: the average in residence has been 193; the highest number on any one day has been 205; ambulance calls, 108. Typhoid fever cases showed 11 for the month as against 24 in 1901, same month.

Medical Council of the Yukon Territory.—The election of members for the medical council of the Yukon Territory, Canada, for 1902, resulted as follows: President, Dr. D. MacLeod; vice president, Dr. Barnett; registrar-secretary, Dr. A. E. Edwards; executive committee, Drs. Barrett, Sutherland and Alfred Thompson, with president and registrar as *ex officio* members.

To Check Spread of Tuberculosis in Montreal.—Last week a very largely-attended meeting was held in Montreal, presided over by Lord Minto, governor general of Canada, for the purpose of considering what measures should be taken for the prevention and cure of tuberculosis. A committee was appointed to create an enlightened public interest, and to further the employment of all means whereby it may be prevented or its ravages lessened.

To Vote for a Sanitarium for Toronto.—The City Council of Toronto has adopted the recommendation of the board of control to submit the following question to the ratepayers at the January city elections: Are you in favor of the city contributing \$50,000 toward the establishment of a sanitarium for the treatment of residents of Toronto suffering from consumption? This is in lieu of a money by-law for which there is said to be no legal authority.

Toronto and Trinity Medical Banquets.—The students and medical faculties of both Trinity Medical College and the University of Toronto held their annual banquets December 3. Professor Barker, '90, Toronto, of the University of Chicago, was present at the latter, and in proposing the toast of "The Professions," delivered an able address on the tendency of medical science. Probably the speech of the evening at the Trinity banquet was that delivered by Dr. T. S. Harrison, a general practitioner of Selkirk, Ont., who is still in active country practice at 75, who gave some very humorous experiences of practice in this province fifty years ago.

Personal.—Dr. Charles B. Shuttleworth of Trinity Medical College, Toronto, has succeeded in passing the examination for F.R.C.S. England; Dr. George W. Badgerow of the same city has passed the M.R.C.S. examination.—Dr. A. P. Crockett of Fredericton, N. B., returned, November 29, from England and the Continent.—Dr. Patrick B. Handyside, for five years in charge of the Naval Hospital at Esquimalt, B. C., has been replaced by Dr. Homer, who, with his family, is now en route from England.—Dr. Robert Wilson, professor of pharmacology and therapeutics in the University of Bishop's College, Montreal, is recuperating his health in the White Mountains.

Canada's Drink Bill.—The annual report of the Inland Revenue Department for the year ending June 30, just issued this month, states that the quantity of spirits produced during the year was 3,234,147 proof-gallons, as compared with 2,652,708 for the previous fiscal year. The people drank more spirits and beer last year than they did in the previous year. The quantity of spirits consumed was .796, as against .767 for the previous year. Beer was 5.102 as compared with 4.737 for

the previous year; and .090 of wine, as against .100 for 1901. Tobacco was the same as last year, the figures being 2,404. Of cigarettes there were consumed 134,236,034, as against 121,383,584 for 1901.

Toronto Insane Asylum.—Charges of a general character have lately been appearing in the society columns of one of Toronto's daily papers against the attendants and nurses of the Toronto Asylum for the Insane, of various cruelties against patients. Dr. Daniel Clark, the medical superintendent, replies to these, stating that they have no foundation, and that they have simply been the cause of much annoyance to the fifty-four persons who attend on the insane in that institution. This is the first time, he states, during the twenty-seven years of his superintendency in which charges have been made against the institution. He concludes his letter asking for names and facts, as he is anxious to refute such sensational allegations.

Public Health in Hamilton, Ontario.—Dr. Walter Langrill, medical health officer of Hamilton, Ont., presented his annual report at a meeting of the Board of Health of that city, December 1. It showed that during the year there were 691 cases of infectious diseases. Of these 106 were diphtheria, with 24 deaths; 64 were cases of typhoid fever, with seven deaths; five were cases of smallpox, with no deaths. The other cases were divided as follows: Scarlet fever, 97, 3 deaths; chicken-pox, 74, no deaths; mumps, 11, no deaths; measles, 222, 2 deaths; whooping cough, 112, 13 deaths. In all 744 deaths were registered, the death rate being 13.7 per 1000. The infant mortality was high, there being 137 deaths of children under the age of one year. Among the general causes of death were: Cancer, 45; heart trouble, 83; tuberculosis, 105. Hamilton has decided to report cases of tuberculosis to its medical health officer.

FOREIGN.

Influenza in England is reported as unusually severe.

Koch Summoned Again to South Africa.—The authorities of Rhodesia have appealed to Robert Koch to assist in the campaign against cattle plague, which is recrudescing.

Smallpox in Greek Archipelago.—A severe outbreak of smallpox is causing great loss of life in the Furni Islands, near Samos, Greek Archipelago, with almost no medical aid available.

Memorial to Widerhofer.—The emperor of Austria has ordered a portrait bust of Widerhofer which he intends to present to the St. Anna Children's Hospital, where the deceased was director for forty years.

Proposed Nurse Schools in France.—The present prime minister of France is a physician, and one of his first acts was to insist on the enforcement of a decree of 1893 calling on the municipal authorities of all towns where there is a medical school to organize a training school for nurses.

Distress in England.—The returns of the London Board of Trade show more unemployed unskilled labor than for ten years. There is much distress among the lower classes. There are 56,000 members of the Army released from service who will add to the number of the unemployed. Public subscriptions are being made for relief.

Anti-Nicotin Cigars Injurious.—The Austrian authorities announce that the chemical treatment of tobacco by Professor Gerold's method does not free the cigars from nicotine, while the chemicals used are more or less injurious. The tests showed .9 to 1.17 per cent. nicotine. The Austrian standard cigars contain 1.29 to 3.99 per cent.

Campaign Against Charlatans in Germany.—A civil suit was recently brought by a physician against a druggist at Breslau who advertised that he would cure all cases of stuttering under guarantee. The physicians managed the case well, and secured conviction and a fine. These cases against charlatans have hitherto been tried in the criminal courts.

The new home of the Paris Academie de Medecine was formally inaugurated by the president of the republic, November 25. The building adjoins the Ecole des Beaux Arts, and is in four parts, each four stories, one devoted principally to the famous library of the academy and one to the vaccination service. This includes stables for the calves, laboratories and waiting rooms for the persons applying for vaccination. The assembly hall is nearly twice as wide as it is deep, with a broad platform and 110 seats. The membership is limited to 100. The expense has been borne by legacies, private subscriptions, and some aid from the state.

LONDON LETTER.

Manufacture of Madmen a Result of the Law of Lunacy.

At the Medico-Psychological Society Sir William Gowers pointed out in an important paper a great defect in the existing Lunacy Laws, which tended to the production of insanity. The law decrees that all persons of unsound mind shall be treated alike, certified as insane, deprived of liberty, and placed under the control of the Commissioners in Lunacy. There is the large class of border-line cases, patients on the verge of insanity, some just over it. Many of them who might recover may be actually rendered insane by the process of being declared so, which certification constitutes. Such cases are very numerous. The nature of the process of certification can not be concealed from many patients, and is most clear to those to whom it is most harmful. Many on the brink of insanity are always haunted by the question: "Shall I go mad?" To them it sounds the knell of hope, for it gives the answer "You are mad." All the security the present law could give, and more, said Sir William Gowers, and all its harmful effects would be avoided by a system of notification. The time has certainly come when a commission should investigate both the work and the constitution of the board of lunacy, and the working of the lunacy act. The twelve years which have elapsed since the act was passed have furnished ample experience of its effect and deficiency. As a temporary measure he proposed that a brief enactment should be passed that the provisions of the lunacy act relating to private patients taken for payment should apply only to such cases as, in the judgment of the commissioners, need to be certified and detained in their own interest or for the safety of others. Among the audience were Sir William Church, Sir William Broadbent, and other distinguished physicians, most of whom addressed the meeting. The matter was unanimously referred to the Parliamentary Committee.

The Sanitation of Lagos.

Sir William MacGregor, the governor of Lagos, who is a medical man, has acquired a reputation as a sanitary pioneer which renders him quite unique among colonial governors. His efforts to improve the health of his deadly West African Colony have been more than once described in THE JOURNAL. At the invitation of the African Trade Section of the Liverpool Chamber of Commerce his excellency was entertained at dinner. Sir Alfred Jones, a Liverpool merchant to whose munificence the Liverpool School of Tropical Medicine is greatly indebted, and who has furnished the means for the various expeditions of that school for the purpose of investigating tropical diseases, presided. Several members of the staff of the school were present. Sir Alfred Jones spoke of the great debt the country owed to Sir William MacGregor for his efforts in West Africa. Replying, the governor said it had been his policy from the beginning in trying to improve sanitation in Lagos, not to confine their efforts to the people of one race or color, but to take along in one line both Europeans and natives. He had always been opposed on principle to the idea of separating the Europeans from the natives in order to avoid contracting malaria from the natives. Of course, the progress will be at a slower rate so far as Europeans are concerned, but if slow it will be sure, and this is the only way of arriving at the extermination of malaria in a place like Lagos. If malaria is mastered, he thinks there is a great future before Lagos. He had no doubt Lagos could be made a fairly healthy place. It is built on a sand island, having a sea breeze. It was announced at the dinner that a chair of tropical medicine had been endowed at University College, Liverpool, by special contributions amounting to over \$50,000, which included the munificent donation of \$25,000 from Sir Alfred Jones, and also \$2500 from the Hon. R. B. Blaize, Lagos. The committee will ask the authorities of University College to appoint Major Ronald Ross, C.B., as the first professor, and to call this chair the Sir Alfred Jones Chair of Tropical Medicine and Parasitology.

PARIS LETTER.

Renault and Danlos Against Mercurial Injections.

According to Drs. Renault and Danlos injections of mercury should be rarely employed, and resort should only be had to them when other methods such as ingestion or inunction have failed to produce any effect. They are less practical and sometimes dangerous.

The Treatment of Hypertrophy of the Prostate.

The treatment of hypertrophy of the prostate, which has entered on a new phase since prostatectomy has come into favor, was the subject of discussion at a recent meeting of the Society of Surgeons. Two of the younger school of surgeons, Dr. Al-

Cuba, and has a marked foreign accent in French, and Dr. Legueu, recently made surgeon of the hospitals, were the champions of this operation. Dr. Legueu had operated twelve times, with a fatal result in one case, an old man of 72, who had diseased kidneys and infection. Dr. Legueu considers it well to incise the urethra immediately, as it is sure to be cut later on in the operation, with doubtful results. He also advocates removing the whole of the prostate gland in two or three large portions. He had noticed as a complication extensive hemorrhage and a tearing of the rectum in two cases, though there was no subsequent fistula. Two patients were afflicted with incontinence after the operation, but Dr. Legueu, from his past experience, considers that this will only be temporary. Dr. Albarran has performed the operation forty-two times and has had but one death from cachexia in an old man seven years old suffering from double pyelonephritis. He does not consider that the indications can as yet be discussed, a statement which seems rather strange coming from a man who has operated so many times. According to Legueu, the size of the prostate is of paramount importance, and would justify the operation when dysuria is followed by retention. Calculi are also a good indication, as they may be removed by the same incision.

Curious Incident at the Society of Biology.

On October 18 the president of the Society of Biology announced to his colleagues that a lady, who was not of his acquaintance, had handed him two envelopes, one of which was to remain closed until the month of June, 1903, the other was to be opened before the society. On doing so, 10,000 francs (about \$2000) were found in it, and are destined to help publish the reports of the society. In writing of this, the editor of the *Presse Medicale* describes it as being very American.

Lucas-Championniere's Technic for Preparing Catgut.

At the Congress of Surgery, held in Paris last October, Dr. Lucas-Championniere, one of the first to introduce into France Lord Lister's principles of antiseptics, described his method for preparing catgut. It consists in Lister's method of placing catgut in a 20 per cent. solution of carbolic acid in oil. The only variante consists in placing it afterward in essence of turpentine. When an operation is to be performed Dr. Championniere places it in a 5 per cent. solution of carbolic acid. He always uses a large thread, as he considers that it is always readily absorbed.

Chloroform versus Ether.

Dr. Julliard of Geneva has reported 9289 cases of narcosis by ether without a single death, either during or after the operation. Asphyxia was overcome in three cases by artificial respiration. Bronchial pneumonia is due, according to this surgeon, to a lack of proper precautions, such as not covering the patient sufficiently and allowing him to get chilled, or else not removing the mucus which forms in the throat. Villar of Bordeaux has had 4000 cases of narcosis by ether without a single death, and Roux of Lausanne considers ether better than chloroform in narcosis. The A. C. E. mixture, which has been tried in England, Vienna and in Italy, has been employed also by Dr. Reynès of Marseilles. He has found it of benefit with old or weak patients, or when there were cardiac, renal, or broncho-pulmonary lesions, where the ether would be injurious for the lungs and chloroform might cause syncope. Chlorid of ethyl is being used more and more as a general anesthetic in some of the Paris hospitals, and the anesthesia produced will sometimes last as much as half an hour; 5 c.c. should be given every five minutes. After a period of anesthesia there is one of analgesia which may last as long as the period of anesthesia. When the operation is to last more than half an hour it is well to begin with chlorid of ethyl, and go on with chloroform or ether.

Sheets of Silver as a Dressing for Wounds.

Dr. Gauthier of Luxeuil described at the Congress of Surgery his use of silver threads and silver sheets in surgery. Instead of employing the ordinary silver thread, Dr. Gauthier uses tressed silver wire, made with threads only 0.08 mm. thick, and which, therefore, can cause no damage to the tissues. Sheets of silver, of extreme thinness, are indicated when wounds bleed easily, after skin-grafting, when there is eczema near a wound, and in all diseases of the skin, instead of the various plasters.

Suppuration of the Pancreas.

Dr. J. L. Faure, surgeon of the hospitals, described at one of the meetings of the congress two cases of suppuration of the pancreas which he had seen, and which have led him to think that this lesion is not so very infrequent. In one case a young

woman showed symptoms of a perforation of the stomach, and on being operated on she was found to have a large retrogastric collection of pus. The pancreas was gangrened, and a fistula, which persisted a long time, showed that the pancreas was the primary seat of the disorder. In the second case the patient, who had lost 50 kilos in weight, was supposed to be suffering from cancer of the stomach. It was found, however, that an enormous mass of adhesions had formed as a result of suppuration of the pancreas. Drainage was made and the patient is now quite cured.

Correspondence.

The Operative Treatment of Strabismus.

An answer to Dr. Geo. M. Gould's paper in THE JOURNAL of the American Medical Association, November 1, page 1106.

PITTSBURG, PA., Dec. 3, 1902.

To the Editor:—If in the following I shall attempt to refute some of Dr. Gould's arguments against the operative treatment of heterophoria and strabismus, I am fully aware of the difficulty of the task. With his overwhelming figures, the weight of his well-earned reputation, and the admirable spirit of sincerity which pervades every phase of his reasoning, Dr. Gould's position is formidable enough to intimidate any "deus minoris gentis."

However, I believe that in the seemingly impregnable wall with which the gallant defender of conservatism has surrounded himself, there are several weak spots; some of the fundamental stones are loosened already by the able efforts of others, and here and there I even find that the builder has altogether neglected to support his foundation with concrete material. In fact, he even furnishes us with the weapons to upset his structure. To speak less metaphorically, and to go right "in medias res," the anatomic relation of Bonnet's capsule to the tendons and its bearing on the conditions as created by tenotomy have been completely ignored in Dr. Gould's chain of evidence. To anyone familiar with the fact that Bonnet's capsule is reflected on the tendons where they pierce the capsule and becomes continuous with the fascia of the muscles (lateral invagination) the effect of severing the tendon must be self-evident: The muscle will exert a certain amount of traction on the capsule; if we now sever the connective tissue between the tendon and the capsule, a procedure which Dr. Gould sees fit to deride as "post-graduate," the muscle will glide back farther into the orbit. For illustration we assume that the internal rectus of the right eye has been severed. Abduction will immediately take place, caused chiefly by the action of the external rectus. The gap thus formed will be the result of two factors: tonicities of the rectus internus and abduction through the rectus externus. While I readily admit that this abduction is partly neutralized by the active effort of the patient to lessen the traction of the wound, I can not see how reinsertion at the former line of insertion can possibly take place, since there remains a gap which no amount of voluntary or involuntary compensation on the part of the other muscles will completely overcome.

This is one theoretical "scrap of evidence" according to which it is utterly impossible that the tendon should become reattached to its former line of insertion, provided, however, that we have severed it completely. All surgical analogy helps to strengthen this assertion. There is not one tendon in the human body which, severed and left alone, will reinsert at its former point. If restitution of the function of the muscle actually takes place it can not be due to any other agency than the one pointed out by Dr. Gould himself, namely, regrowth of tissue. But who will deny that in the latter case—filling of the gap through new tissue—an actual lengthening of the muscle has taken place?

The mere admittance of this possibility renders irrelevant the argument that a tendon will not grow on an unabraded, uninjured surface. However correct this assertion may be, it does not come into consideration in our case for the above reason that the gap formed by the operation will be bridged over by newly-formed connective tissue which finally will unite the two surfaces, and, by its interposition, will add to the total length

of the muscle. If it happens occasionally that this bridge does not develop, it does not necessarily imply that no insertion whatever will take place. What Dr. Gould pronounces the invariable rule, to-wit, that the surface behind the stump is unabraded and uninjured, seems to me, on the contrary, a very rare exception. The technique of the operation makes such abrasions more than probable, and if there were in my mind any doubt left, my practical experience of about two score of repeated tenotomies would remove even the slightest shadow of such a doubt. The rule is that in repeated tenotomy we shall find the line of insertion moved back. So typical have I found this condition that in a second tenotomy on the same muscle I invariably make the conjunctival incision from 2 to 4 mm. farther back than in a first tenotomy.

Another equally good *modus restitutionis* is that in which filling of the gap through newly-formed tissue is combined with insertion behind the former line of attachment. In such cases we find a broad surface instead of a line of attachment, a condition which clearly indicates that the surface behind the stump was abraded during the first tenotomy. But leaving aside even these practical "scraps of evidence," there is another factor which has not been considered by Dr. Gould. Assuming that no reattachment has taken place at all (for instance, immediately after the operation), has the severed muscle lost all of its power over the eyeball? By no means. The traction on Bonnet's capsule still remains and will prevent the antagonist from exerting his full force. If this were not the case, how could we explain the formidable amount of adduction that remains after complete severance of an internus? Merely by the action of the auxiliary adductors? If so, why will the severing of the belly of the muscle produce such a marked decrease in adduction, or abduction, as the case may be?

So far, all of our arguments have been directed against the theory of reinsertion at the old place, together with the establishment of a *status quo antea*, on which theory Dr. Gould bases his assertion: "Hence, in a few months or a year all the old troubles return after needless surgical intervention."

For obvious reasons we shall not condemn all of Dr. Gould's conclusions because one of his premises was incorrect. Thus we perfectly agree with him as regards the one feature that tenotomy can do little or nothing toward removal of the primary causes of the large majority of strabismus cases. We shall be able to correct slight degrees of astigmatism by relieving some of the lateral pressure on the globe; we can remove part of the strain on the antagonist and thus enable the latter to respond more promptly to impulses; we bring the optic axis in a more favorable position for macular vision, where macular vision is still possible, but, unless conditions are especially favorable, some of the old troubles (not all of them) will return, not because the tendon will reinsert at the old line of attachment, but because the primary factors can not be eliminated in all cases.

All of these objections can not have any bearing on the important role which tenotomy, eventually combined with advancement, plays as a preparatory measure for the treatment of some of the above troubles. Take, for instance, all those cases of heterophoria and strabismus in which the primary factor is hypermetropia, with its excess of accommodative impulses, which implies at the same time an excess of convergence. An immense expenditure of nervous energy, time and money may be saved to the patient if we remove the deficit in abduction by a suitable operation on the hypertrophied internus. The correction of the refractive errors will be simplified, the time of the treatment shortened and the appearance of the patient permanently improved; in other words, surgical intervention will smooth the path for intelligent non-surgical treatment.

Nevertheless, Dr. Gould assures us that with the exception of one (!) case he never saw the results of an operation in heterophoria or strabismus of which he should be proud to say he did it! Considering the sincerity, enthusiasm and trustworthiness of the distinguished Philadelphia author, there remains nothing for us but to express our regret that he should be the victim of what I am inclined to take for an extraordinary coincidence. With Dr. Risley I offer as an ex-

planation for this strange phenomenon that the scores of successful operations that he must needs have performed himself never returned to his view, simply because they were cured or perfectly satisfied with the results obtained.

Having thus established the fallacy of some of Dr. Gould's premises, I proceed to examine his arguments in favor of non-operative treatment. In this respect, it seems to me, Dr. Gould has committed the error of "reckoning without his host." While this would not necessarily imply the scientific untenability of his position, it will erect an unsurmountable barrier to the indiscriminate acceptance of his therapeutic suggestions. "Tiat principium, pereat mundus," is a very dangerous maxim. A therapeutic measure, be it ever so correct, must be feasible before it can be universally adopted. Applied to our case, we must always bear in mind that we have often to contend with factors which are absolutely beyond our control. Of these factors I mention here the intellectual standard of the vast majority of our patients, their ages, their individual wishes, the time required and inconvenience caused by prolonged treatment, and last, but not least, the financial circumstances of the average patient. Once more I repeat, that all these objections are not directed against the correctness of the assertion that the non-surgical treatment of strabismus is the more accurate, scientific and (occasionally) the more harmless mode of therapeutics, but against its practical feasibility. We must reckon with circumstances as they are and not as they might be, which does not, at the same time, exclude our duty to work toward a state of conditions, as they should, or will be, in the far, far-away future.

Until the arrival of that millenium state, when the public will realize the necessity of having their babies' eyes examined by the expert; until the latter, including those who had the misfortune of an European education, with all its "ophthalmologic error and therapeutic sin," will be able to use retinoscopy to such a degree of accuracy that they may determine the refractive errors of the fetus in utero; until the dawning of that Bellamic era of prosperity which will enable us to engage a couple of special nurses for our little tots—not until then will the conservative treatment of strabismus become uniformly adopted.

The sovereign indifference which Dr. Gould exhibits with reference to the cosmetic possibilities of tenotomy is surprising, to say the least. It has been my experience, which I believe will be verified by the majority of my esteemed confrères, that 95 out of every 100 patients who consulted me for correction of an existing squint, did so in the expectation of having their unsightly deformity removed, and not for the relief of asthenopia. From the standpoint of the average patient the importance of correction of his refractive errors dwindles into insignificance as compared with that of his deformity. As a matter of fact, can we hold him responsible for this indifference to his ametropia or astigmatism, if he suffers no inconvenience whatever from the latter defects, if time and again we meet with patients who had been unconscious of their ametropia up to the very day that they consulted us for the purpose of having their eyes "straightened"? Besides, Dr. Gould's allusion to the *laissez aller* policy is not very happily illustrated by the example of "the leg that we do not strap out of the way"; a man may see with one eye, and see pretty well, but I have yet to see the first man who walked on one leg.

In the introductory lines of this paper I have taken the liberty of pointing to the fact that Dr. Gould has furnished us with the tools for upsetting his structure. "Every good oculist," he says, "has hundreds of patients who have no deformity and who have binocular vision—so long as their spectacles are in place. Raise the lenses and instantly there is strabismus! That is a demonstration convincing to everyone." Indeed it is! A more striking illustration could not have been found in the whole material of evidence against the failures of conservatism. Just imagine the happiness naturally arising from the consciousness that the mere raising of the lenses instantly restores the strabismus! The happiness of such a patient can only be surpassed by that of another, to whom we have just brought the glad tidings that it will probably take ten years to cure his strabismus.

In the foregoing lines we believe to have amply demonstrated to what fallacies the rigid adherence to any one system may lead. It has led one of America's foremost oculists to denounce surgery as the "despair of medicine"! A statement like the above, coming from such an authoritative source, involves an imminent danger to both the profession and the public. It will be taken up by every quack in the country and serve as a ready reference in their pompous advertisements, to cure "crossed eyes, cataracts, films and scums" without the use of the knife.

It is not within the scope of this paper, nor within the ability of its writer, to point out all the tortuosities, grades and obstacles in the path which alone can, will and must lead to salvation. I will, therefore, restrict myself to the summary statement that the solution of the problem lies, in my opinion, in the happy blending of conservatism with radicalism. The promiscuous adoption of the one is as dangerous as the wholesale condemnation of the other.

In conclusion, I deem it my duty to express surprise at the low opinion that Dr. Gould seems to entertain with regard to European oculists. The statement that "there is probably not an 'ophthalmic surgeon' in all Europe who can use this method [retinoscopy] with accuracy"—not to dwell on the difficulty of furnishing the proof for such an assertion—bears every mark of improbability in consideration that this method is practiced by several of Europe's best oculists, almost in total preference to any other method of refracting children.

Another criticism of the same order is equally unjustified. Quoting a paragraph in Dr. Fuchs' text-book, Dr. Gould says: "In anisometropia we give the same glasses for both eyes, or correct only one eye and place a plane glass before the other." Commenting on this paragraph, Dr. Gould remarks: "I set this sentence out in capital letters as displaying as much ophthalmologic error and therapeutic sin as could easily be gathered into so many words."

In the first place, the quotation is not correct. The text before me (page 659, translation by Dr. Duane, 1896), reads: "We *therefore* prefer in anisometropia either to give the same glasses for both eyes, or to correct only one eye and place a plane glass before the other." In connection with the preceding and following sentences and duly considering the word "therefore," the sentence gains an altogether different aspect. After stating that the obvious course would seem to be to correct the anisometropia by ordering different glasses for the two eyes, Dr. Fuchs remarks that this measure proves impracticable in *most* cases; mentions the symptoms arising from anisometropia of a high degree, gives his explanation, which I believe to be theoretically and practically irreproachable, and finally, by inserting the above quoted sentence, "we *therefore* prefer," etc., calls our attention to the method to be adopted for those cases in which we have failed to give satisfaction by prescription of different glasses, referring chiefly to glasses with a different index (+ or —), as can be readily seen from the connection with another preceding sentence.

A. S. SIGMANN, M.D.

COMMENT BY DR. GOULD.

A more careful reading of my paper would have resulted in an avoidance of a number of errors in Dr. Sigmann's courteous criticism. I will not take up valuable space to detail these, except in one illustrative instance: In the body of my article it is expressly stated that the excerpt wherein occurred the quotation from Fuchs was from an article written ten years ago. I do not garble quotations, and, when written, the quotation was verbatim from the last edition. That four years later Fuchs had progressed to the position illustrated by Dr. Sigmann's quotation is encouraging. What will the progress be in the next four years?

As to the misuse of truth by quacks, that does not concern me. To refuse to accept and state truth because of such dangers is to accept the ethics of the quack. As to European oculists, they are the peers of any as regards pathology and inflammatory and surgical diseases. But proper refraction prevents both classes of diseases. Of proper refraction European oculists know almost absolutely nothing. In this their work is the most absurd. A patient of mine consulted the

most famous "ophthalmic surgeon" of Germany last summer, and for an enormous astigmatism (of which the surgeon was utterly incurious) he ordered massage of the eyes by the patient. For blepharitis, due to refractive error, another famous man told another patient to squeeze out the secretion of the Meibomian glands with her fingers. A great French oculist ordered simple isometric spherical lenses for astigmatic anisometropia, and expressed indignant surprise at the idea that he, the oculist, should have kept any record of the lenses he had ordered. I could enumerate many such laughable instances. But such things are common enough in America also, and to gibe at the refraction of the *fetus in utero* does not make them less common.

It is true that extremes are dangerous and that the middle-of-the-road is usually the safest and truest. Not always, however! A compromise, if for the sake of compromise, may be a worse error than either extreme. The time is not far past when one who should have proposed to cure strabismus (and surely heterophoria!) by any other method than operation would have been looked on as crazy.

GEORGE M. GOULD, M.D.

Midshipman Aikin and Vivisection.

PHILADELPHIA, Dec. 5, 1902.

HON. JACOB H. GALLINGER,

Chairman of the Senate Committee on the District of Columbia, Washington, D. C.

My Dear Sir: As you have repeatedly introduced bills into the Senate for the purpose nominally of regulating experiments on animals in the District of Columbia, which bills, however, if they had become laws, would in fact have prohibited many, if not all of them, I deem it my duty to call your attention to the case of Midshipman Aikin of the United States Naval Academy, who was recently injured in a football game. My reason for doing so is to show you by a single concrete example that knowledge gained by animal experimentation is an immense boon to humanity and that, therefore, such experiments should be heartily encouraged.

The facts of Mr. Aikin's case are as follows: When I first saw him, three days after the accident, I found that he had been unconscious for a half hour after the accident and ever since then had complained bitterly of headache, which he located always in the forehead. Mentally he was very dull, though not comatose. His pulse was slowed down to 52 instead of being 72, the normal. Soon after the accident he began to develop convulsions, first in the right leg, afterward in the right arm also, the right arm being finally the chief seat of the convulsions. When they were very severe they involved the left side also. The face was never involved. In six hours and a half after I first saw him he had 24 of these attacks, all limited to the right arm. They were not attended by any loss of consciousness. They exhausted him very greatly, especially when they were excessively severe. Several times it was necessary to give him chloroform.

There was no fracture of the skull. The only physical evidence of any injury was a very slight bruise at the outer end of the left eyebrow.

Had I seen this case before 1885 I would have been unable to explain why the spasms were chiefly manifested in the right arm, and from the evidence of the slow pulse, the headache, the stupor, the bruise in the left temple, etc., I would have been justified in inferring that probably the front part of the brain was injured at the site of the bruise. Had I opened his skull at that point I would have found a perfectly normal brain and have missed the clot. The young man, therefore, would have died, whether his skull had been opened or not.

In 1902 observe the difference. As a result of the knowledge derived from experiments on animals which have located precisely the center for motion of the right arm on the left side of the brain near the top and a little in front of a vertical line drawn through the ear, and disregarding entirely the site of the headache and the bruise, I reached the conclusion that there had been a rupture of a blood vessel within the head, which had poured out a quantity of blood, and that the

situation of the clot should correspond to the "arm center." The location of this arm center was far away (about three inches) from the location of the bruise, and its position was fixed absolutely as a result of experiments on animals, confirmed later by many operations on human beings and also by postmortems.

As soon as the skull was opened at this point the clot was found, its thickest point being exactly over the arm center and nine tablespoonfuls of blood were removed, with the result that the patient's life has been saved. The blood had first been poured out over the "leg center," which is located a little higher up than that for the arm. This explained the early spasms in the right leg. The clot did not extend, however, further down than the arm center. This explained why the face was never convulsed, for the "face center" lies just below that for the arm.

I think if you were to ask the parents of this young man how many animals they would be willing to have sacrificed in order that their son might have his life saved, there would be no doubt of the answer. Indeed, had it been your own son, I can not doubt the answer. But this is only one of hundreds of cases in which a similar exact localization has been made by many surgeons, both in Europe and America. Yet, by a curious coincidence, in the very same issue of a Baltimore newspaper containing a reporter's account of the successful operation on Midshipman Aikin there is a letter signed by an active antivivisectionist agitator, which, among other misstatements and misrepresentations usually found in such publications, asserts that "brain surgery is disregarded."

If the laws which you and your friends advocate were in force, the conditions for scientific investigation in medicine in this country would be quite as deplorable as those in England. For example, when Lord Lister, who has revolutionized modern surgery, largely as a result of such experiments, wished to discover possibly some still better way of operating by further experiments, he was obliged to go to Toulouse to carry them out, as the vexatious restrictions of the law in England practically made it impossible for him to continue there these pre-eminently humane experiments.

Again, when Sir T. Lauder Brunton in London started a series of experiments on animals to discover an antidote for the cobra and other snake poisons of India, where every year 20,000 human lives are sacrificed by snake bites, these beneficent researches were stopped by the stringent British laws to protect animals. Meanwhile half a million of human beings have hopelessly perished.

Who, I may ask, is the more humane; he who, doubtless with the best and sincerest motives of love for dumb beasts, would prohibit experiments on animals and thereby prevent the acquisition of such knowledge and so compel surgeons to stand with folded arms and see innumerable lives thus needlessly sacrificed; or he who, by properly instituted experiments, would discover such new truths and apply them to the service of humanity?

The antivivisectionists have frequently denied that surgeons have learned anything from such experiments. I presume that I may be considered a competent witness as to the source, at least, of my own knowledge, and I state with the greatest positiveness that without the knowledge derived from experiments on animals which have demonstrated the facts of cerebral localization, I should never have been able to locate the clot in Mr. Aikin's head and to remove it, nor would I have been able in the last fifteen years to locate numerous tumors and other brain troubles and relieve many of them. What is true of myself is equally true of other surgeons.

In view, therefore, of the evident and positive benefit of such experiments, I trust that you will be willing to desist from further efforts at such repressive and, as I regard it, most inhumane and cruel legislation.

As this matter is of vital importance to the well-being of the entire community, I shall take the liberty of giving this letter to the press as soon as you have received it.

Yours very respectfully,

W. W. KEEN,
Professor of Surgery, Jefferson Medical College.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

WHAT STATES ACKNOWLEDGE DIPLOMAS?

CHICAGO, Nov. 28, 1902.

To the Editor:—Kindly inform me through THE JOURNAL what states acknowledge college diplomas or Illinois licenses.

R. S. BENTLEY.

ANS.—The following states accept diplomas from a recognized college as a qualification for license to practice: Arkansas, Colorado, Kentucky, Michigan, Nebraska, Nevada, New Mexico, South Dakota and Wyoming. It is optional with the Board in Kansas. In Colorado those not holding recognized diplomas are granted licenses after passing an examination. An Illinois license is possibly recognized in Wisconsin and Indiana, as well as in Michigan, but we have not received the latest information in regard to the matter.

TECHNIC OF TONGUE TRACTION.

GOSHEN, IND., Nov. 27, 1902.

To the Editor:—Please give me, through your columns, the technic of Laborde's method of resuscitating the drowned; also state what is the important factor in the method as it is practiced that causes a return of the voluntary respirations in the patient. How many times to the minute should these rhythmic tractions of the tongue be practiced?

B. T. WILLIAMS.

ANS.—Laborde's method of resuscitating the drowned consists in rhythmic tractions on the tongue at the rate of the normal respiration or a little slower. The theory of its action is that it is a reflex one. The tongue should be drawn upward and not over the lower jaw.

HAWAIIAN PRACTICE RULES.

MINNESOTA, Dec. 1, 1902.

To the Editor:—What is required to obtain a license to practice medicine in the Sandwich Islands? To whom would one apply for such license?

G. F. P.

ANS.—To practice medicine in Hawaii a license is required, given after examination by the Board of Health. Dr. J. S. B. Pratt, Honolulu, is the executive officer of the board.

State Boards of Registration.

South Carolina Litigation.—Some time ago the South Carolina Legislature exempted four-year course graduates of medical colleges in that state from examination. A class that had taken a course of three years applied for the free licenses, which were refused. One member contested the matter, and the Supreme Court has just decided in favor of the board. The class will, therefore, have to be examined.

Kansas Board Can Revoke Licenses.—An important decision has been rendered for the Board of Registration of Kansas, affirming their power to revoke the licenses of practitioners whom they consider unfit to practice. One Meffert of Emporia was accused of gross immorality, and the board revoked his license. He applied for an injunction and it was refused. The ruling states that the right to practice medicine has been decided not to be a right of citizenship, and the judge declares that the board has the right to refuse that privilege to anyone until he has proven his fitness.

Michigan Report.—The Michigan State Board of Registration in Medicine reports, by Dr. B. D. Harison, secretary, Sault Ste. Marie, the examination held at Lansing, October 14-17: Number of subjects examined in, 19; questions, 190; percentage required, 75; written examination; number examined, 14; passed, 8; failed, 6.

		PASSED.			
Candl.	Sch. of	College.	Year	Per	
date.	Pract.		Grad.	Cent.	
1	R.	University of Nebraska	1895	79.63	
2	R.	Med. Coll., State of South Carolina	1884	89.00	
3	R.	McGill University, Montreal	1902	86.73	
4	R.	Toronto University	1902	82.63	
5	R.	Baltimore Medical College	1902	82.21	
7	R.	Toledo Medical College, Ohio	1901	79.52	

FAILED.

10	R.	Independent M. C. (Diploma Mill)	1896	21.42	
11	E.	Independent M. C. (Diploma Mill)	1899	46.73	
14	R.	Jenner Med. Coll., Chicago (student)		72.73	

NOTE: Nos. 6 and 8 were undergraduates who passed with grades of 89.89 and 76.68 respectively. Nos. 9 to 14 were undergraduates who failed.

Book Notices.

THE PRACTICE OF SURGERY. A Treatise on Surgery for the Use of Practitioners and Students. By Henry R. Wharton, M.D., Clinical Professor of Surgery, Woman's Medical College of Pennsylvania, and B. Farquhar Curtis, M.D., Professor of Clinical Surgery and Adjunct Professor of the Principles of Surgery in the University and Bellevue Medical College of New York. Profusely Illustrated Third Edition. Cloth. Pp. 1241. Price, \$6.50. Philadelphia and London: J. B. Lippincott Co. 1902.

The articles in this edition have been fully revised and a large amount of new matter introduced. The editors have condensed the facts in such a way as to bring as much as possible within the compass of the volume. It seems to us to meet the needs of a text-book fairly well. The authors have signed their separate articles, but endorse the practical conclusions throughout the work so that we notice no serious defect in the work, such as often happens in composite works from overlapping of subjects or difference of individual views. The illustrations are very good.

DEATH AND SUDDEN DEATH. By P. Brouardel, Professor of Medical Jurisprudence, Dean of the Faculty of Medicine, Paris, and F. Lucas Benham, M.D., B.S. (Lond.), M.D. (Adelaide), Member of the Royal College of Physicians of London. Second Edition. Cloth. Pp. 336. Price, \$3.00. New York: Wm. Wood & Co. 1902.

The translator says that in preparing the former edition he had felt with some regret that the treatise was too brief, and that he has in this edition met this difficulty by numerous additions enclosed by brackets. These seem to us to add material to the value of the work. For a book of reference on the questions, medicolegal and otherwise, relative to sudden death it is an excellent one; in fact, we know of no other in our language which fills its place within its compass.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS, comprising Ten Volumes of the Year's Progress in Medicine and Surgery, Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume X. Skin and Venereal Diseases, Nervous and Mental Diseases. Edited by W. L. Baum, M.D., and Hugh T. Patrick, M.D. September, 1902. Cloth. Pp. 245. Price, \$1.25. Chicago: The Year-Book Publishers.

This tenth volume of the series gives the principal advances made in these two branches of medicine during the year, and like the other handbooks of the series, will be found very useful to the general practitioner.

Marriages.

S. S. MEYERS, M.D., Centerville, Kan., November 26.

WALTER WALDEN, M.D., to Miss Albertine Wilhelm, both of Chicago, December 3.

CHARLES REED, M.D., Chicago, to Miss Ethelyn Eaton of Beloit, Wis., December 2.

WILLIAM T. SHIPP, M.D., to Mrs. Carrie B. Ward, both of Coffeyville, Kan., November 24.

THOMAS R. BROWN, M.D., to Miss Jeanne McComb Albert, both of Baltimore, November 27.

CHARLES T. GRAHAM-ROGERS, M.D., to Miss Mary C. Church, both of New York, November 26.

HOWARD TICKLE, M.D., to Miss Virginia Jarrett, both of Charleston, W. Va., November 26.

GEORGE W. MAX, M.D., to Miss Isabelle Mitchell, both of Willimantic, Conn., November 28.

C. CHURCHILL CARMALT, M.D., New York City, to Miss Alice Kidd of Tivoli-on-Hudson, December 4.

HERMAN L. NIETERT, M.D., to Miss Katherine Ziegenhein, daughter of the ex-mayor of St. Louis.

CAMILLE COTE, M.D., Marlborough, Mass., to Miss Edna Whitcomb of Quincy, Ill., November 27.

ALPHA D. UPDEGRAFF, M.D., Anthony, Kan., to Miss Sadie Eaton of Kansas City, Kan., November 24.

SAMUEL G. STAPLES, M.D., Washington, D. C., to Miss Douglas Maryon of Biloxi, Miss., November 26.

LEWIS M. BUNNELL, M.D., Tecumseh, Mich., to Miss Charlotte Alice Trotter of Rochester, N. Y., November 25.

ALVIN L. LIGHT, M.D., Dayton, Ohio, to Miss Carlotta Thomas, National Military Home, Ohio, December 3.

RICHARD F. HARRELL, M.D., Ruston, La., to Mrs. Sarah Page McKee of Philadelphia, at Ruston, La., November 23.

JOHN ROGER HAYNES, M.D., East View, N. M., to Miss Juanita Armijo of Albuquerque, N. M., November 22.

ELAM R. WRIGHT, M.D., Alton, N. H., to Miss Anna Murray of Valley Falls, Kan., at Alton, N. H., November 27.

WILLIAM SIMS BOYD, M.D., Jersey City, N. J., to Miss Florence Augusta Evans of Orangeburg County, S. C., at Columbia, S. C., November 19.

Deaths.

Henry P. Fricker, M.D. Columbian University, Washington, D. C., 1860, for several years superintendent of the State School for the Blind, Columbus, Ohio, and surgeon of the Twentieth Ohio Infantry, U. S. V., in the Civil War, died at his home in Ashtabula, November 27, after an illness of several weeks, aged 66.

Gregor C. McGregor, M.D. New York University, 1850, who had practiced in Texas for half a century, and was one of the organizers of the Washington County Medical Association, and at one time its president, died at his residence in Waco, November 23, after an illness of several months, aged 78.

H. Melville Smith, M.D. College of Physicians and Surgeons, New York, 1871, for 18 years a practitioner of Jersey City, and president of the medical board of Christ Hospital, died at his home in South Orange, from nervous prostration, November 28, aged 55.

Mirza N. Benjamin, M.D. University of Vermont, Burlington, 1864, a native of Oroomiah, Persia, and one of the youngest surgeons in the Civil War, died at his home in Dunkirk, N. Y., after an illness of nearly five months, aged 59.

William H. Stayner, M.D. College of Medicine of the University of Illinois, Chicago, 1898, aged 42, committed suicide, December 3, by shooting himself in the head and then throwing himself in front of a rapidly-moving railway train.

Henry W. Ochsner, M.D. Johns Hopkins Medical School, Baltimore, 1902, a member of the medical staff of the Johns Hopkins Hospital, died at that institution from typhoid fever, November 25, after an illness of 18 days, aged 25.

Charles M. Lee, M.D. Geneva (N. Y.) Medical College, 1850, died at his home in Fulton, N. Y., November 28, after a short illness from pneumonia, aged 77. He had served as president of the Oswego County Medical Society.

Allan P. Ebbert, M.D. Starling Medical College, Columbus, 1889, died from pneumonia, after a short illness, November 28, at his residence in Atlanta, Ga., aged 39. He served as surgeon through the Spanish-American War.

Harry Luther Kiehl, M.D. Western Pennsylvania Medical College, Pittsburg, 1896, of Fayette City, Pa., died suddenly at his father's home near Bentleyville, Pa., November 29, from heart disease, aged 34.

Benjamin C. Toler, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1859, died at his home in Astoria, Ill., from cancer of the stomach, November 30, after an illness of five months, aged 74.

James Allen, M.D. Berkshire Medical College, Pittsfield, Mass., 1849, died at his home in Richford, N. Y., aged 75. He served in the Civil War as surgeon of the Eighty-ninth Infantry, N. Y. Volunteers.

Joseph Clark, M.D. London University (Guy's Hospital), England, 1847, who had practiced in Baltimore for 30 years, died at his home in that city, November 27, from Bright's disease, aged 78.

George F. Monahan, M.D. Maryland Medical College, Baltimore, 1900, of Woonsocket, R. I., died suddenly, November 23, at Saranac Lake, N. Y., where he had gone on account of ill-health, aged 27.

Norman Garibaldi Ross, M.D. Michigan College of Medicine and Surgery, Detroit, 1896, died from taking an accidental dose of strychnin, November 27, at his home in Detroit, aged 27.

William P. Clower, M.D. Pennsylvania Medical College, Philadelphia, 1855, for many years a resident of Moultrie, Ga., died at his home in Cairo, Ga., November 17, from paralysis.

David H. Montgomery, M.D. Pennsylvania Medical College, Philadelphia, 1852, died at his home in Millinville, Pa., November 28, from paralysis, after a short illness, aged 68.

Francis M. Phillips, M.D. Tulane University, New Orleans, of Lexington, Miss., 1892, was accidentally shot and killed, November 23, while hunting near Ruleville, Miss., aged 33.

William H. Ingram, M.D. Memphis (Tenn.) Hospital Medical College, 1897, died at his residence in Kenedy, Texas, November 24, after an illness of more than a year.

James D. Abels, M.D. Louisville (Ky.) Medical College, 1894, of Grant, I. T., died in Paris, Texas, November 20, after an illness of two months, from typhoid fever.

William A. Guild, M.D. Harvard Medical School, Boston, Mass., died at his home in Sanford, Fla., November 21, from paralysis, after a short illness, aged 75.

J. Landis Seitz, M.D. Jefferson Medical College, Philadelphia, 1882, died suddenly at his home in Harrisburg, Pa., November 28, from apoplexy, aged 46.

John M. Welsh, M.D. Cincinnati College of Medicine and Surgery, 1869, died at his home in Deersville, Ohio, from cancer, November 21, aged about 60.

Samuel Aughey Suloff, M.D. Rush Medical College, Chicago, 1882, of Patterson, Pa., died suddenly from heart disease, at Rockville, November 23, aged 45.

Adam E. Robson, M.D. Medical College of Ohio, Cincinnati, 1888, died suddenly from heart disease, November 27, at his home in Cincinnati, aged 40.

Frank R. Agur, M.D. Toledo (Ohio) Medical College, 1893, died at his residence in West Toledo, November 30, as the result of an overdose of cocaine.

Curtis A. Wood, M.D. Dartmouth Medical College, Hanover, N. H., 1878, died at his home in Dublin, N. H., December 1, from diphtheria, aged 56.

Deaths Abroad.

Dr. L. Landois, professor of physiology at Griefswald. His "Manual of Physiology" has been translated into several languages, and his contributions to science include the discovery of the cortical, thermic center, and much research on transpiration, histology of the nerves, etc. He was born in 1837.

Dr. M. Wilde of the Institute of Hygiene at Munich, a member of the editorial staff of the *Munchener Med. Woch.*—Dr. L. Marvaud, chief of the French military sanitary service. His property was bequeathed to establish a fund for the widows of Army surgeons in need.

Dr. F. Dornbluth, one of the leading authorities on hygiene in Germany, and indefatigable in its promotion, died at Frankfurt-on-Main, aged 77. Among numerous works in this line were popular treatises on the hygiene of the home, of athletics, of the school, etc.

Association News.

New Orleans in May.

There has been expressed a fear that the climate of New Orleans in May is liable to be too warm for comfort. We are assured, however, that there need be no fear on this account, for May is one of the pleasantest months in the year there. Considering that the Association meeting will be held in the first week of May, it is not at all likely that the heat will be oppressive. Touching on this matter the current number of the *New Orleans Medical and Surgical Journal* says:

MAY IN NEW ORLEANS.

"The blushing spring bears witness to the tranquil season, when the iris flecks the fallow fields in tones of gray and brown and blue, and where the dogwood beckons in the swampland and clovers whiten roadsides with their fragrant bloom. The magnolia blossoms to the tune of twittering birds, while roses and the jasmines, fresasias, columbine and the mellow orange flowers make the May time sweetest of the year.

"The balmy nights are redolent with odors of Nature's fruitful promise; too soon for broods of festive culex, or of gnat; while toothsome fish and fowl are plentiful.

"May is the month of New Orleans' months. When the sun shines with glory and with fended ray; when starlight seems brighter, because the nights are less marked by clouds; when the dew is early and the showers have grown less frequent in a cloudless sky.

"The days grow longer in the May time and twilight halts, slow to speed the passing day; from out the open windows float upon the willing air the sounds of home. This is the season.

And while the time or day is not of our choosing, we, of the medical guild, are glad to say to the members of the American Medical Association, brothers in the art, come in May!"

One-Half Rate Assured.

Dr. Thomas H. Stucky, chairman of the Committee on Transportation, notifies us that the Southeastern Passenger Association has given one fare for the round trip for the New Orleans meeting. That association will recommend to the other passenger associations that this rate be adopted. Since the passenger association covering the territory in which the meeting is to be held usually sets the rate for the whole country, there is no doubt that all the other passenger associations will adopt the recommendation of the Southeastern, and that we will have half rates from all over the country.

New Members.

New members for the month of November, 1902:

ALABAMA.

Sellers, Ira J., Birmingham.

CALIFORNIA.

Hashimoto, Shingo, San Francisco.
Coffey, W. B., San Francisco.
Banta, W. P., San Francisco.
Champion, Jos. Austin, Colton.
Hawkins, J. H., St. Helena.
Langdon, S. W. R., Stockton.
Allen, Lewis W., San Francisco.
Hawkins, S. J., San Francisco.
Pond, Henry May, Alameda.
Stratton, R. T., Oakland.
Owen, J. A., Red Bluff.
Watters, Peter Kemp, Watsonville.
Cheney, Wm. Fitch, San Francisco.

COLORADO.

Hess, Wm. L., Denver.
Cosby, O. W., Tabasco.
Schavoir, Frederick, Stamford.
Thorp, Rollin L., Denver.
Courtney, J. E., Denver.

CONNECTICUT.

Cooper, L. E., Ansonia.
Anderson, Arvid, New Britain.
Ramsey, Otto G., New Haven.

DELAWARE.

Briggs, H. W., Wilmington.
Forrest, G. W. K., Wilmington.
Wm. M. Ogle, Delaware City.

DISTRICT OF COLUMBIA.
Baler, Geo. K., Washington.

FLORIDA.

Blount, B. B., Punta Gorda.
Liell, Edw. N., Jacksonville.
Marsh, Chas. Franklin, Pensacola.
Skaggs, P. T., Miami.

GEORGIA.

Cox, Wm. James, Pennington.
Lewis, F. L., Camilla.
Harrison, E. S., Thomson.
Bryan, John A., Pendergrass.
Collier, T. J., Griffin.
Thomas, Dennis Lang, Eatonton.
Ainsworth, Harry, Thomasville.

IDAHO.

Dubois, J. K., Boise.
Hannberg, J. J., Oakley.
Higgs, A. A., Soldier.

ILLINOIS.

Bleuler, Ernest A., Carlinville.
Adams, A. R., Tennessee.
Haskell, Hiram A., Chicago.
Fowler, Edson B., Chicago.
Fox, John Sebastian, Chicago.
Merrill, Julia M., Chicago.
Barker, M. R., Chicago.
Roberts, Norman J., Waukegan.
Ray, D. S., Cuba.
Peterson, S. G., Rutland.
Oyler, H. S., Lincoln.
Bonar, B. L., Streator.
Sheetz, C. R., Freeport.
Bane, Samuel, Ellsworth.
Shaw, A. M., Ottawa.

INDIANA.

Roney, David C., Milan.

INDIAN TERRITORY.

Wear, John B., Poteau.

IOWA.

Pierce, W. F., Carson.
Boyd, C. E., Newton.
Scott, W. A., Maquoketa.

Smith, Jessie V., Winterset.
Shively, J. D., Des Moines.
Breene, Frank Thomas, Iowa City.
Victor, Albert Lycurgus, Kalo.
Birney, C. E., Estherville.
Cole, J. H., Council Bluffs.
Bradley, Wm. E., Estherville.
Sandy, Aural A., Harvey.
Johnson, George Monroe, Maquoketa.
Staples, Geo. Allen, Dubuque.
Priestley, Crayke, Des Moines.
Turner, M. L., Des Moines.
Van Marel, G. P., Pella.
Bufkin, E. W., Runnells.

KANSAS.

Preston, Jas. F., Effingham.
McDonald, Frank A., Aurora.
Cullen, Geo., Topeka.
Rooney, Arthur P., Horton.
Daniels, E. N., Beloit.
Helwig, Orville L., Garden City.
Nason, Zachariah, Kansas City.
Lindsay, W. S., Topeka.

KENTUCKY.

Blackburn, John H., Bowling Green.
Shirley, I. A., Winchester.

LOUISIANA.

Gremillion, Cyriaque Joseph, Alexandria.
Lea, Jesse W., Jackson.
Lewis, Geo. Wm., New Orleans.
Roussel, Joseph Numa, New Orleans.
Ayo, S. A., Thibodaux.

MARYLAND.

Cromwell, M. J., Lake Roland.
Warfield, R. B., Baltimore.
Thomas, H. M., Baltimore.
Schutz, E. A., Baltimore.
Humer, Guy L., Baltimore.
Hurd, H. M., Baltimore.
Williams, J. W., Baltimore.
Wilson, Gordon, Baltimore.
Peterman, H. E., Baltimore.
Brooke, Chas. H., Brooklyn.
Gorter, N. R., Baltimore.
Lockwood, W. F., Baltimore.
Pleasants, J. Hall, Baltimore.
Wilson, J. J., Cumberland.
Dunton, W. R., Jr., Towson.
Scott, J. McP., Hagerstown.

MASSACHUSETTS.

Mallory, Frank Burr, Boston.
Dixon, Lewis Seaver, Boston.
Whiteside, Geo. S., Boston.
Daniels, Edwin A., Boston.
Harrington, Chas., Boston.
Clark, J. Payson, Boston.
Emerson, Francis P., Boston.
Heves, Henry F., Boston.
Burrage, Walter L., Boston.
Broughton, Henry W., Boston.
Brooks, Wm. A., Jr., Boston.
Balch, Franklin Greene, Boston.
Palmer, Sarah Ellen, Boston.
Vickery, Herman Frank, Boston.
Gay, Geo. W., Chestnut Hill.
Hall, H. Porter, Leominster.
Dennett, Chas. A., Arlington.
Charles, Orlando W., Bryantville.
Brown, Alphonso B., Newburyport.
Hoitt, Eugene G., Marlboro.
Hastings, Robt. W., Brookline.
Nichols, John T. G., Cambridge.
Cobb, Oliver W., Easthampton.
McAllister, Frederick D., Lawrence.

Fowler-Noble, Anngnette, West-Evans, Samuel M., New York City.
Sweet, Frederick B., Springfield.
Stevens, Andrew J., Malden.
Sherman, Frank Morton, West City.
Newton.
Currier, W. Eugene, Leominster.
Atwood, Chas. F., Hyde Park.
Brown, Henry R., Leominster.
Cleaves, E. E., Rockport.

MICHIGAN.

Burland, Samuel C., Ludington.
Curtiss, Loren, Paw Paw.
Alton, R. W., Portland.
Barnum, W. H., Fremont.
Harris, Dudley R., West Branch.
Hoffman, John W., Detroit.
Coughlin, John W., Bay City.
Law, Oliver H., Detroit.
Morley, Wm. Horace, Ann Arbor.
Chester, John L., Emmett.
Kellogg, J. H., Saginaw.
Purdon, James, Edmore.
Edwards, Presco I., Jackson.
Atkinson, W. T., Marlette.
Lombard, Warren Plimpton, Ann Arbor.
Smith, Theodore H., Mt. Clemens.

MINNESOTA.

Vernon, H. S., Lewiston.

MISSISSIPPI.

Crisler, Julius, Jackson.
Ross, Theophilus Erskine, Hattiesburg.
Baton, Melbourne Lafayette, Leakesville.
Buchanan, Jas. M., Meridian.
Bailey, O. L., Ocean Springs.

MISSOURI.

Chamberliss, E. L., Kansas City.
Bansbach, Joseph J., Savannah.
Houston, E., Savannah.
Fulkerson, J. J., Lexington.
Stephens, Philip, California.
McComas, Arthur R., Sturgeon.
Coffey, Grundy C., Platte City.
McKee, Joseph W., Kansas City.
Barger, James N., Darlington.
Herndon, Albert S., Camden Point.
Pile, Oscar F., Memphis.

MONTANA.

Hunter, Joseph C., Great Falls.

NEBRASKA.

Coulter, F. E., Omaha.
Armstrong, Geo. C., Cambridge.
Cherry, A. B., Winside.
Plumb, Perry E., Gothenburg.

NEW HAMPSHIRE.

Abbott, Clifton S., Laconia.

NEW JERSEY.

Schoening, Gustav A., Trenton.
Terriberry, G. N., Paterson.
Brown, Adolph G., Redbank.
McEwen, Floy, Newark.
Surnamer, Isaac, Paterson.
Thompson, Chas. H., Belmar.
Walsheld, Arthur J., Union.
Vreeland, Hamilton, Jersey City.

NEW YORK.

McDonald, Alexander E., New York City.
Southworth, Thomas Shepard, New York City.
Shaffer, Newton Melman, New York City.
Tierney, John T., New York City.
Baruch, Emanuel, New York City.
Ward, Freeman F., New York City.
Boyer, Arthur A., New York City.
Bogue, Edward A., New York City.
Collins, Joseph, New York City.

Holmes, Edwin, New York City.
Rakestrand, Chauncey, New York City.
Tyson, Henry H., New York City.
Frank, John, New York City.
Kohn, Albert, New York City.
Jewett, May B., New York City.
Staniland, Geo. S., New York City.
Friedman, Samuel, New York City.

Oberndorfer, I. Pierce, New York City.
Ewald, L. Anton, New York City.
Grosse, Friedrich, New York City.
Greene, Mary T., Castile.
Hillis, Christopher J., Griffin Corners.
Montgomery, J. J., Luzerne.
Eggleston, H. Wardner, Binghamton.
Saladino, Domenic, Manhattan.
Skerry, Harry W., Brooklyn.
Sharpe, Frank Mansfield, Brooklyn.

Rossman, Clark G., Hudson.
Deady, Howard Perry, Liberty.
Getty, Andrew H., Athens.
Watt, James, Brooklyn.
Thornton, Wm. Irving, Buffalo.
Hodge, Wm. H., Niagara Falls.

NORTH DAKOTA.

Barton, Ira, Sanborn.

OHIO.

Hart, Chas. S., Marietta.
Gotwald, D. J., Springfield.
Biggar, Hamilton F., Jr., Cleveland.

OKLAHOMA.

Rector, Newton, Hennessey.

OREGON.

Tape, G. W., Hot Lake.

PENNSYLVANIA.

Montgomery, Jas. P., Buckhorn.
Anderson, J. Hartley, Pittsburg.
Snodgrass, Henry Lane, Buffalo.
Morrow, Geo. S., Dayton.
Levengood, B. B., Bellwood.
Morrison, Robert, Oakdale.
Deemar, John Thos., Manorville.
Russell, J. M., Pittsburg.
Fitzgerald, J. M., Clarion.
Gile, Ben C., Wehrum.
Braucht, H. S., Spring Mills.
Baker, Louis G., Parker's Landing.
Davis, John M., Darlington.

SOUTH CAROLINA.

Quattlebaum, Theo. A., Batesburg.

SOUTH DAKOTA.

Clark, Wm. E., Frederick.

TENNESSEE.

Glasgow, Wm. H., Cumberland City.

TEXAS.

Hofstetter, Geo. A., Corsicana.
Stevens, B. F., El Paso.
Vials, W. N., El Paso.
Schuster, M. P., El Paso.
Stevenson, Herbert E., El Paso.
LeGrand, Cecil Warren, Hempstead.

VIRGINIA.

Bruin, M. R., Strasburg.

WEST VIRGINIA.

Jones, Anderson Porter, Hebron.
Jarvis, Louise, Clarksburg.
Depue, Homer B., Parkersburg.

WISCONSIN.

Becker, W. F., Milwaukee.

Medical Organization.

The Ohio Council.

The council of the Ohio State Medical Society met at the Chittenden Hotel, Columbus, November 30. All the members but one were present, and a very admirable spirit of enthusiasm in the work of organizing the profession was displayed. The state was divided up into provisional councilor districts, and a certain number of counties assigned to each councilor. Views as to the best methods of carrying on the work of organization were discussed, and plans of procedure were mapped out. The council organized by the election of Dr. Brooks, F. Beebe of Cincinnati as chairman, and Dr. Thomas Charles Martin of Cleveland as secretary. The following is a list of

the members of the council, with the district which each represents:

FIRST DISTRICT—Counties: Hamilton, Clermont, Brown, Adams, Butler, Warren, Highland, Clinton, Fayette. Councillor, Brooks F. Beebe, Cincinnati.

SECOND DISTRICT—Counties: Preble, Montgomery, Greene, Darke, Miami, Clark, Mercer, Shelby, Champaign. Councillor: Horace Bonner, Dayton.

THIRD DISTRICT—Counties: Van Wert, Auglaize, Logan, Allen, Hardin, Marion, Wyandot, Hancock, Seneca. Councillor, Frank D. Bain, Kenton.

FOURTH DISTRICT—Counties: Paulding, Putnam, Defiance, Henry, Wood, Sandusky, Williams, Fulton, Lucas, Ottawa. Councillor, Julius H. Jacobson, Toledo.

FIFTH DISTRICT—Counties: Erie, Huron, Medina, Cuyahoga, Lorain, Lake, Geauga, Ashtabula, Trumbull. Councillor, Thomas Charles Martin, Cleveland.

SIXTH DISTRICT—Counties: Summit, Portage, Mahoning, Stark, Wayne, Holmes, Ashland, Richland. Councillor, Harry H. Jacobs, Akron.

SEVENTH DISTRICT—Counties: Columbiana, Carroll, Jefferson, Harrison, Belmont, Monroe, Tuscarawas, Coshocton. Councillor, J. C. M. Floyd, Steubenville.

EIGHTH DISTRICT—Counties: Guernsey, Noble, Washington, Muskingum, Morgan, Athens, Licking, Perry. Councillor: Edmund C. Brush, Zanesville.

NINTH DISTRICT—Counties: Hocking, Vinton, Meigs, Pike, Jackson, Gallia, Scioto, Lawrence. Councillor, John E. Sylvester, Wells-ton.

TENTH DISTRICT—Counties: Crawford, Morrow, Knox, Delaware, Madison, Franklin, Union, Pickaway, Fairfield, Ross. Councillor, T. W. Rankin, Columbus.

There are 88 counties in the state, and at present 45 of them have county medical societies. The council feels sure, however, that by the next annual meeting of the Association in May, 1903, there will be a medical society in every county in the state. In view of the willingness shown by every member of the council, it is not too much to expect that this hope will be quite fulfilled. The work of organizing the medical profession of Ohio is in excellent hands.

The Indianapolis Medical Society, the Medical Society of Marion County (Ind.).

The Marion County Medical Society has changed its name to that given above. It will be informally known as the Indianapolis Medical Society.

Charlevoix County (Mich.) Medical Society.

This society was organized at Charlevoix, November 21, with Dr. L. M. Kanagy, Charlevoix, president; Dr. Harmon E. Boice, Boyne, vice-president; Dr. Guy L. Laraway, Boyne Falls, secretary, and Dr. Harry E. Shaver, Boyne, treasurer.

Ohio State Medical Society.

The board of councilors of the Ohio State Medical Society, at a meeting held in Columbus, November 30, empowered the secretary, Dr. P. Max Foshay, Cleveland, to divide the state into districts, for the better organization of the society in all the counties. Each member of the board will have charge of the work in one district. There are now forty-three counties which are not organized.

Carroll County (Tenn.) Medical Society.

The physicians of Carroll County met at Huntingdon, November 20, and reorganized the county society as an integral part of the Medical Society of the State of Tennessee. The following officers were elected: Dr. Joseph W. McCall, Huntingdon, president; Drs. James B. Cox, Huntingdon, and Charles T. Love, McLemoresville, vice-presidents; Dr. William N. Enochs, Huntingdon, secretary, and Dr. Addison McN. Grizzard, Buena Vista, treasurer. Dr. William M. Wright was elected to the House of Delegates of the State Society, with T. C. Love, Hollow Rock, as alternate.

Monroe County (Pa.) Medical Society.

This society, whose object is stated to be "the organization of the medical profession of the county of Monroe by connection with the State Medical Society and the American Medical Association; the promotion of knowledge on subjects connected with the healing art; the advancement of the character and prosperity of those interested in the practice of medicine and the employment of means calculated to render the profession most useful to the public and subservient to the present interests of humanity," was organized at Stroudsburg, November 24. Dr. Nathaniel C. Miller, Stroudsburg, was elected president; Dr. John C. Henry, East Stroudsburg, vice-president; Dr. William E. Gregory, Stroudsburg, secretary, and Dr. Hagerman, Stroudsburg, treasurer.

Van Buren County (Mich.) Medical Society.

On November 7 a meeting of the physicians of Van Buren County was held to organize this society. It was attended by delegates from Decatur, South Haven, Bangor, Mattawan and Lawrence, Drs. George W. Lowry, Hastings, and William H. Haughey, Battle Creek, being present to assist in perfecting the organization as planned by the American Medical Association. Dr. George D. Carnes, South Haven, was elected president; Dr. James Murphy, Bangor, vice-president, and Dr. Norris A. Williams, Bangor, secretary and treasurer.

Societies.

COMING MEETING.

Western Surgical and Gynecological Association, St. Joseph, Mo., Dec. 29 and 30, 1902.

Burlington and Chittenden County (Vt.) Clinical Society.—At the annual meeting of this society in Burlington, November 28, Dr. Harris R. Watkins was elected president; Dr. Bingham H. Stone, vice-president, and Dr. Clarence H. Beecher, secretary and treasurer, all of Burlington.

Iowa County (Iowa) Medical Society.—This society held its annual meeting in Williamsburg, November 21. Dr. William C. Schultze, Marengo, was elected president; Dr. Arnold C. Moon, Williamsburg, vice-president; Dr. Edgar B. Henderson, Marengo, secretary, and Dr. William F. Moershel, Homestead, treasurer.

Keokuk County (Iowa) Medical Society.—This society held its annual meeting at Sigourney, November 25. Dr. William Pfannebecker, Sigourney, was elected president; Dr. Robert H. Payne, Richland, vice-president; Dr. Charles S. Cilley, What Cheer, secretary, and Dr. Leonard B. Oliver, Sigourney, treasurer.

William Pierson Medical Library Association of the Oranges (N. J.).—At the annual meeting of this association, November 28, the following officers were elected: Dr. Thomas W. Harvey, Orange, president; Drs. Richard C. Newton, Montclair, and Joseph C. Young, Newark, vice-presidents; Dr. Richard D. Freeman, South Orange, secretary; Dr. J. Hammond Bradshaw, treasurer, and Dr. Henry A. Pulsford, South Orange, librarian.

Redlands, Riverside, San Bernardino and Pomona Valley (Cal.) Medical Societies.—These societies held a union meeting at Loma Linda, October 22, over which Dr. Frank Garcelon, Pomona, presided, while Dr. Charles C. Browning, Highland, acted as secretary. A committee consisting of Drs. C. von Swalenburg, Riverside, Daniel W. White, San Bernardino, and Elverson E. Major, Redlands, was appointed to consider the organization of a district society.

Northeast Kansas District Medical Society.—This society was organized at Kansas City, Kan., November 24, with 40 members. The counties which form the district are: Atchison, Brown, Doniphan, Douglas, Geary, Jackson, Jefferson, Johnson, Leavenworth, Marshall, Morris, Nemaha, Osage, Pottawatomie, Riley, Shawnee, Wabaunsee and Wyandotte. The purpose of the district organization is to aid the state society in the various phases of its work, but more particularly in the enforcement of the medical practice act. The following officers were elected: Dr. Russell A. Roberts, Kansas City, president; Dr. William E. McVey, Topeka, vice-president; Dr. James Naismith, Lawrence, secretary, and Dr. Clarence C. Goddard, Leavenworth, treasurer. The society will meet in Topeka, Feb. 5, 1903.

NEW YORK ACADEMY OF MEDICINE.

Meeting of the Section on Surgery, Oct. 13, 1902.

Dr. Robert T. Morris in the Chair, protem.

Preoperative Preparation of the Surgeon and His Assistants.

DR. GEORGE R. FOWLER, Brooklyn, read this paper. With regard to disinfection of the hands he said that he preferred the general cleansing by combined mechanical and chemical means. As the nail brush is prone to cause fissures about the nails, it is well to substitute folds of sterile gauze for the nail brush. Metallic nail cleaners for a similar reason are desirable. At one time he endeavored to eliminate this source of infection by having the nails kept very closely trimmed. This

answered well for the purpose intended, but the consequent loss of tactile sense and the inability to pick up small instruments finally caused him to discard this method. He recently found that an excellent method of cleaning the nails was by seesawing with the selva edge of sterile gauze. He elaborated this idea by having constructed a frame of steel spring wire, like the frame of a keyhole saw, and substituting for the saw a small round brush. After thorough scrubbing and disinfection of the hands with alcohol they are usually sterile for a short time, but if placed in warm water for a few minutes microbes will quickly come to the surface.

The author thought rubber gloves undeniably of value, but said their sphere of usefulness was limited to examinations of very septic cases. They are inappropriate for ordinary operative work because of the impairment of tactile sense, the risk of tearing or puncturing them and the catching of the needle in the gloves. The fact that they really poultice the hands, and thus cause numerous microbes to come to the surface of the hands, explains how they may become an added source of danger. He is in the habit of filling the creases in the hand with a solution of potassium permanganate and corrosive sublimate, and one not familiar with the method would be astonished at the coating that dries on the hands after their immersion in this solution. While operating he prefers to dip the hands from time to time in a solution of corrosive sublimate of the strength of 1 to 2000. For this purpose it has been found that a cold solution is much more effective than a hot one.

Dr. Fowler then went on to consider the danger of infection from the uncovered hair, whether of the head or beard. It is only necessary to refer to the frequent presence of dandruff in the scalp, to say nothing of street dust, to see the necessity for covering the head during an operation. He prefers the use of a closely-fitting cap for this purpose. The mouth is also known to be a source of infection, for, while it is probably true that bacteria are not thrown off during quiet expiration, it is entirely different when expiration becomes more forcible or conversation is indulged in. Bacteriologic studies have proved indisputably that under such conditions bacteria are thrown to a considerable distance, which not only shows the need of covering the mouth during operation and refraining from unnecessary conversation, but also suggests the advisability of enjoining silence on all the spectators at surgical clinics.

DISCUSSION.

DR. FREDERICK HOLME WIGGIN approved of the suggestion to use sterile gauze instead of the nail brush. He is accustomed to cleanse the hands and arms by scrubbing for several minutes with a stiff sterile bristle brush and tincture of green soap, and then washing first with alcohol and then with an alcoholic solution of bichlorid of mercury, 1 to 300. A final cleansing is given with sterile water. Only during prolonged operations does he think it necessary to dip the hands into a disinfecting solution, and for this purpose he uses an alcoholic solution of bichlorid, and follows it with sterile salt solution. While he has never used the cap, it is his custom to guard against infecting the wound with perspiration by wearing on the brow a scarf made of several layers of gauze. Conversation during operations should be reduced to the minimum, not only because of possible infection from this source, but because it serves to distract the attention of the operator.

DR. CARL BECK thought it probable that in many instances an infection has been attributed to improperly prepared catgut, when in reality it had arisen from the coming to the surface of bacteria that had been sheltered in the follicles of the skin. The application of tincture of iodine is a good means of controlling skin infection.

DR. MARTIN W. WARE pointed out that cotton gloves should prove superior to rubber ones because they do not tend to macerate the skin of the hands.

DR. JOSEPH WIENER, JR., earnestly recommended rubber gloves, and insisted that those who persisted in their use for two years would find that most of the difficulties of manipulation incident to their use would disappear. After such an experience he would not now think of doing any abdominal operation, any clean or any septic operation without rubber gloves. He now rarely punctures them, and he finds that he

can palpate fully as well with as without them. In the surgical work at the Mt. Sinai Hospital it has been recently discovered that the gloves can be used with greater facility, and that the hands underneath can be kept dry, by free dusting with sterile talcum powder. One of the great advantages of operating with rubber gloves is that should the operator happen to infect the finger by handling pus, the rubber gloves can be almost instantly disinfected, whereas the uncovered hand requires at least fifteen minutes.

DR. ROBERT T. MORRIS remarked that the danger of infection from the puncture of rubber gloves would vary from day to day, depending on the individual powers of resistance at the time. He thought it would be difficult for an inexperienced operator to become expert in palpation with the rubber gloves unless he had previously had the advantage of training in palpation without the use of these gloves. Surgeons who operate with rubber gloves take longer to do a given operation than when they do not use these gloves. The speaker has recently been experimenting with certain sulphite depilatories with a view to securing destruction of skin bacteria, and so far with very encouraging results. As blood serum is known to be germicidal, it is doubtful if it is necessary to dip the hands in a disinfecting solution while operating.

DR. FOWLER, in closing, said he was glad that mention had been made of the danger of infection from perspiration, for he felt sure he had seen one fatal case due to this cause. The application of tincture of iodine to the skin, particularly in emergency, where there was no opportunity for proper preparation of the patient, is an excellent practice which he has used for the past ten years. If rubber gloves are admitted to interfere with the tactile sense, then this objection applied with fifty-fold more force to the use of cotton gloves. He has tried the chlorin method faithfully, and while it seems to satisfactorily sterilize the hands it produces so much irritation of the skin as to make it necessary for many surgeons to avoid it.

Treatment of Diseased Joints by Plaster Strapping.

DR. F. R. COOK described this method, so earnestly advocated by Dr. V. P. Gibney, in 1893, and in many places known by his name. In order to secure full benefit from this treatment it is not enough to merely make a diagnosis of sprain; one should determine what ligaments are involved, whether these have more than one insertion or function, and what special fasciculi are sprained. This information is usually obtained by learning what is the position of the part at the time of the injury, the position of the parts when at rest and when in motion after the injury, and by comparing the amount of pain produced by forcing the parts into all of the extremes of motion of which the joint is capable. It is also well to determine the areas of maximum tenderness and maximum local heat. The strapping acts as a support to the sprained ligaments, as a means of producing counter-irritation or fomentation of the injured part, and produces massage within proper limits. In cases of contusion the strapping is applied with the parts relaxed, and in sprains, with the parts in closer approximation. The method is also applicable to many cases of stiffened joints following fractures or over-immobilization. In strapping the wrist he uses very narrow straps applied in a figure-of-eight. When there is much effusion in the knee-joint, one strap should be carried around the joint at its center, and then the others applied alternately above and below the knee, the straps meeting at the hamstring muscles and diverging. In strapping the shoulder the first straps should be carried from the chest around the shoulder to the back, and then the others applied above and below as in strapping the knee.

BUFFALO ACADEMY OF MEDICINE.

Regular Meeting of the Section on Surgery, held Nov. 3, 1902.

The President, Dr. Herman Hayd, in the Chair.

DR. ROSWELL PARK read a timely paper on "The Physics and Therapeutic Value of the (Roentgen) Cathode and Ultra-Violet Rays, with Certain References to the Electro-Magnetic Theory of Light; with Exhibition of New Instruments for Phototherapy."

Dr. Park referred to the electro-magnetic theory of light, and also to the studies which culminated in the discovery by Roentgen of the cathode rays. These rays are of short vibration, a velocity of 250,000 yards a second, as compared to other light rays, such as the Hertzian rays of longer vibration, and the latter made available by Marconi in his wireless telegraphy apparatus. The source of the cathode rays is electrical discharges in vacuum, and it was in vacuum that Roentgen studied these electrical discharges.

Dr. Park referred to the phenomenon of phosphorescence and to the rare metals radium and uranium, which have great actinic properties. This was illustrated by an experimenter who, carrying one of these metals on his person, suffered a deep and painful slough near the point of contact. These light rays exercise an influence on animal organisms. They also affect plant life, for in their growth plants turn to source of light.

The rays have a bactericidal effect on bacteria, which has been shown by several experimenters, the heat rays being less effective than the chemical rays.

The ultra-violet rays are capable of producing many of the effects of sunlight, i. e., the chemical rays of sunlight on the skin; lesions varying from dermatitis to gangrene can be produced and it seems that this effect is more pronounced in blondes. The actinic effect of light is proportionate to the absorption.

Dr. Park alluded to the influence of light on the variolous process, the deepest scars and marks occurring in such places not protected from the light, head, neck, forearm and hands, to the treatment of smallpox in the middle ages by placing such patients in environments of red light. He also spoke of a photodermatic sense by which certain animals can distinguish by their integument between red rays and blue rays.

Light rays are a bactericidal agent, the question now is as to the depth of penetration. This is proven by the excellent results of the treatment of lupus by the Finsen method. Dr. Park showed the Finsen plano-convex lens, and also the arc-light condenser, which is used for this purpose, and emphasized that the part to be treated should be made bloodless, so as to prevent the blood from absorbing the rays. For this purpose several methods of compression have been devised, such as ice, rock salt, and quartz lenses. A protection should be given to the skin or parts not to be exposed. There are three sources from which the ultra-violet rays may be obtained, (1) sunlight, (2) arc light, (3) condensor spark. The ultra-violet rays and α -rays are bactericidal. During the contact with the rays organisms do not thrive, but removed from their action they will thrive and grow again.

As to the therapeutics of the cathode and ultra-violet rays Dr. Park stated that the kind of lesions which often yield to the action of these rays are lupus, cancer, actinomycosis, furunculosis, etc. The efficacy of action being due to the property of either destroying or preventing growth of germs, this being, according to writers, in part an explanation of the disintegrating effects noted, notably in cancer, which he believes to be parasitic in origin. The rays are better than caustic plasters and pastes, which are not so selective in its action.

A remarkable effect from the use of the rays is the relief of pain seen in deep and superficial cancer. This symptom is often relieved by one or two applications; for this reason it may be used in neuritis and vaginal affections associated with pain.

Dr. Park has submitted 100 cases to the α -rays and ultra-violet rays for treatment. A Finsen plant has been installed and is now ready for use at his clinic at the General Hospital. Some of the cases treated have been successful, in others no improvement was to be seen. The phototherapy is useful for superficial growths and of limited area; it relieves pain; it is adopted to inoperable cases; it relieves the odor of putrefaction in sloughing growths. Burns from its use can be avoided, it is a good supplementary treatment after operations, and does not interfere in its application with a person's business. Dr. Park protects the parts not to be exposed from burns by a layer of putty between layers of oiled silk.

Dr. ELMER G. STARR referred to certain experiments of α -rays on bacterial life. Cultures were placed on colored glass plate and exposed to rays. In red glass bacterial life was fair; in the yellow glass growth was good, equal to sunlight, whereas, in blue glass the growth was checked.

Dr. H. R. GAYLORD stated that the continental physicians still regarded the actinic therapy as being in an experimental stage, but great hopes of ultimate good was entertained. It was used in Breslau in Mikulicz's clinic, and the effects as yet are uncertain. Some cancers are known to disappear.

Dr. MATTHEW D. MANN stated that he had used the α -ray treatment on a number of inoperable cases of cancer at the General Hospital. In one case the effects after three months are marvelous. The case was a woman, 50 years of age, with a cancer of the uterus involving cervix and vagina and inoperable. After a three months' vacation in Europe, the patient being treated meanwhile, he examined her and found her practically well. All cases of cancer are not so successful and Dr. Mann believes that the epitheliomata are the class of cases most benefited. The treatment is now being used on a case of cancer of the external genitals, involving vulva and vagina. It is an epithelioma far past operative interference; another case of epithelioma of cervix is being treated in this manner.

Dr. HERMAN HAYD pleaded for conservatism in the use of α -rays, and stated that in early cases of cancer no time should be wasted in attempting to check growths, but the surgeon's knife is the most certain means. He is somewhat disappointed in the use of the α -rays. On one case of scirrhus cancer it was used after operation, but there was no diminution in growth. It may be that the rays have a selective action for certain forms of cancer, the epitheliomata being those from which the better results can be obtained.

Dr. PARK, in closing, stated that the α -rays should never replace surgical procedure in early cancer cases. It is a good adjuvant and valuable to use after operations.

SANITARY CONFERENCE OF THE AMERICAN REPUBLICS.

Meeting held in Washington, D. C., December 2 to 6, 1902.

Temporary Chairman, Dr. Ulloa of Costa Rica, in the Chair.

This conference, called by the governing board of the International Union of the American Republics in accordance with a resolution adopted at the Second International Conference of the American States, held in the City of Mexico, 1901-02, assembled in Washington, December 2.

Welcome.

The delegates were welcomed to the city by Dr. Walter Wyman, Surgeon-General of the United States Public Health and Marine-Hospital Service, who spoke of the meeting in Mexico last winter as inaugurating a new era in the progress of civilization in the new hemisphere, as it provided for the International Conference on Customs, International Coffee Commission and International Conference on Sanitation and Quarantine. The Secretary of the Treasury and the Assistant Secretary of State extended greetings from their departments. Senor Quesada, minister from Cuba, spoke with much warmth of the part the United States had taken in bringing about better sanitation in Cuba, and paid eloquent tribute to Gen. Leonard Wood, U. S. Army, late military governor of Cuba, and to the late Major Walter Reed for his efforts in ridding the country of yellow fever. Addresses were also made by the Mexican ambassador, Don Manuel de Aspiroz; Major Walter D. McCaw, representing the Army, and Medical Director George P. Bradley, on behalf of the Navy.

Receptions.

A reception to visitors was given at the New Willard, December 3, and they were received by President Roosevelt at noon on December 4.

Committee on Organization.

Dr. Ulloa of Costa Rica was made temporary chairman and appointed as Committee on Organization, Dr. Carlos Finlay, Cuba; Dr. Eduardo Moore, Chile; Dr. H. L. E. Johnson,

Washington, D. C.; Dr. Glendower Owen, and Minister Felipe Carbo, Ecuador. This committee reported the following plan of organization:

Your committee respectfully reports that, to carry out the intent of this Sanitary Conference, there should be:

1. A president, who shall also be the chairman of the executive board known as the International Sanitary Bureau.

2. One vice-president from each republic represented at this conference. The duties of the vice-presidents shall be in the order named, to preside in the absence of the president.

3. A secretary. The duties of the secretary shall be to keep a record of the proceedings of the conference from day to day, with a view to their publication, to be followed by the publication of specially prepared papers relating to the subjects before the conference.

4. An advisory council, to consist of six delegates. The president shall be ex-officio a member of said advisory council. The duties of the advisory council shall be to prepare the program from day to day, to examine and pass upon the papers which it is proposed to be presented before the conference, to consider resolutions that are presented in general meetings and report upon them to the general conference, with recommendation either for their passage or rejection, and to attend to such other matters as may be referred to it.

The committee further nominates the following officers to fill the positions named above, namely: For president, Surgeon-General Walter Wyman, U. S. P. H. and M.-H. Service. For vice-presidents, Dr. Moore, Chile; Dr. Ulloa, Costa Rica; Dr. Guiteras, Cuba; Minister Carbo, Ecuador; Consul General Shernikow, Salvador; Lazo-Arriaga, Guatemala; N. B. Peraza, Honduras; Dr. Liceaga, Mexico; Dr. Roman, Nicaragua; Mr. Stewart, Paraguay; H. L. E. Johnson, United States, and Chargé de Affaires Herrera, Uruguay. For secretary, Dr. Arthur R. Reynolds, Chicago. For members of the advisory council, Dr. Rhett Goode, U. S.; Dr. M. J. Rosenau, U. S.; Dr. Juan Guiteras, Cuba; Dr. E. Liceaga, Mexico; Major Walter D. McCaw, U. S., and Dr. Ulloa, Costa Rica.

The International Sanitary Bureau shall consist of five members, one of whom shall be the president of this conference, the other four members to be nominated to the conference by the advisory council, and the said council shall also recommend to the convention the time and place for the next annual conference.

The report was unanimously adopted by the conference.

(To be continued.)

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Hemicrania.

N. F. Howard, in *Atlanta Journal-Record*, employs the following combination in the treatment of migraine:

R. Ammon. muriatis	5iii	90
Tinct. belladonnæ	3i	4
Tinct. hyoseyami	3ii	8
Aq. menth. pip.	3iv	16
Aq. camphoræ q. s. ad	5xvi	480

M. Sig.: One half to one teaspoonful given in sweetened water every two or three hours.

Hemoptysis.

Lemoine, in an abstract in *Amer. Med.*, states that in the hemoptysis occurring at the beginning of tuberculosis, the patient should have absolute rest in bed in a well-aired room and given easily-digested food; revulsion is accomplished by the use of hot foot-baths and purgative enemas. A mustard plaster may be applied to the chest and thighs. Internally the following is given:

R. Pulv. ergotæ	gr. viiss	50
Quininæ sulph.	gr. ivss	30

M. Ft. cachet No. i. Sig.: To be taken in the morning with a bowl of milk.

In the course of tuberculosis, he employs ergotin as follows:

R. Ergotin	gr. 1/6	01
Acidi lactici	gtt. x	05
Aq. destil	3iiss	10

M. Sig.: Four drops may be injected hypodermically at the beginning. If the hemoptysis is persistent, tartar emetic or ipecac must be used.

According to the same periodical iodoform may be given internally in divided doses in the treatment of tuberculosis. The dose is grain 1/6 (.01 gm.) at a time, not exceeding grains 10 (.6) daily. Usually 3 grains (.2) are sufficient. In any case the susceptibility of the patient will govern the dose, which

must be small at first. Iodoform is incompatible with alkalies and calomel. It may be used internally, as follows:

R. Iodoformi	gr. i	06
Guaiacol (crys.)	gr. xlv	3
Olei amygdalæ dulcis	m. iii	20
M. Ft. capsulæ No. iii. Sig.: One three times a day; or:		
R. Iodoformi	gr. xv	1
Olei amygd. dulcis	Oi	500
Spts. cinnamomi	m. xv	1
M. Sig.: One tablespoonful three times a day; or:		
R. Iodoformi	gr. xv	1
Olei morrhue	Oi	500
M. Sig.: One tablespoonful three times a day.		

Externally iodoform is employed in the form of iodoform collodion as follows:

R. Iodoformi	gr. xx-3i	1.30-4
Collodii	3i	30
M. Sig.: Apply locally to the affected parts.		

The foregoing, according to the author, may be employed in all forms of tuberculous suppurations, hydrocele, and exophthalmic goiter. The following combination may be used by injections into the trachea in laryngeal tuberculosis:

R. Iodoformi	gr. xv	1
Olei olivæ (sterile)	3i	30

M. Sig.: To be used in small amounts intratracheally or hypodermically.

Expectorants in Bronchitis.

The following preparations are valuable expectorant mixtures, according to *Pract. Druggist*, which may be employed in the treatment of the different forms of bronchitis where expectorants are indicated:

R. Ammon. carb.	gr. x	65
Tinct. opii camph.	3i	4
Tinct. scillæ	3i	4
Syr. tolutani	3ii	8
Decoct. senegæ q. s. ad	3ii	60

M. Sig.: One teaspoonful every three or four hours; or:

R. Syr. pruni virg.		
Syr. scillæ comp.		
Spts. etheris nitrosi		
Tinct. opii camph., āā	3i	30

M. Sig.: One teaspoonful three or four times a day; or:

R. Olei picis liq.	m. xv	1
Ext. marrubii flu. (horehound)	5ss	2
Olei anise	m. i	06
Spts. frumenti	3i	30
Mellis despumati q. s. ad	3ii	60

M. Sig.: One half to one teaspoonful three or four times a day; or:

R. Syr. senegæ		
Syr. pruni virg.		
Syr. acaciæ, āā	3i	30

M. Sig.: One teaspoonful every four hours for a child.

La Grippe.

The following combination containing heroin is recommended by the *New Orleans Med. and Surg. Jour.* in the treatment of la grippe:

R. Heroin	gr. 3/4	045
Ammon. chloridi	3i	4
Syr. picis liq.	3i	30
Syr. tolutani	3i	30
Syr. pruni virg.	5ss	15

M. Sig.: Two teaspoonfuls every three or four hours.

Salol in Cystitis:

According to the *Jour. de Med. de Paris*, it is advantageous in certain cases to prescribe salol internally in the form of an emulsion. The following preparation is recommended in the treatment of cystitis or gonorrhea instead of the powder:

R. Salol	3i	4
Gum arabic	3i	4
Gum tragacanth.	gr. iii	20
Tinct. tolutani	3iiss	10
Syr. simp.	3i	30
Aq. destil.		

M. Sig.: One teaspoonful three times a day.

Gout.

The following outline of treatment is recommended by Colbeck and Chaplin in the treatment of gout: A mercurial purge in combination with compound jalap powder, colocynth, or rhubarb should constitute the initial treatment, followed after a few hours by a saline aperient. One of the following mixtures should then be prescribed:

R. Potassii bicarb. gr. xx 1|30
Potassii citratis gr. xv 1|
Vini colchici m. xv-xxx 1-2|
Spts. chloroformi m. viii 50
Aque menth. pip. q. s. ad.℥i 30|

M. Ft. mistura. Sig.: Two tablespoonfuls to be taken every four to six hours; or:

R. Vini colchici m. xv-xxx 1-2|
Mag. sulph. 5ss 2|
Mag. carb. gr. x 65
Aq. menth. pip.℥i 30|

M. Sig.: Two tablespoonfuls to be taken every four hours;

or:

R. Ammon. chloridi gr. xv 1|
Potassii citratis gr. xx 1|30
Liq. ammon. cit.℥ii 8|
Spts. etheris nitrosi 3ss 2|
Syr. limonis 5ss 2|
Aq. camphoræ q. s. ad.℥i 30|

M. Ft. mistura. Sig.: Two tablespoonfuls every four to six hours.

The use of local anodyne applications is usually indicated, which may be combined as follows:

R. Linimenti opii
Linimenti chloroformi
Linimenti belladonnæ, āā℥i 30|

M. Ft. linimentum. Sig.: To be applied freely to the inflamed joint; or:

R. Chloralis hydratis gr. ii 12|
Tinct. opii℥ii 8|
Aque q. s. ad.℥i 30|

M. Sig.: To be applied freely to the inflamed joint.

The authors state that after the subsidence of the acute inflammatory process the following ointment may be applied for the relief of the itching and for the promotion of the absorption of the inflammatory products:

R. Chloralis hydratis gr. ii 12|
Potassii iodidi gr. x 65
Lanolini
Adipis, āā 3ss 15|

M. Ft. unguentum. Sig.: To be applied locally to the inflamed joint.

To relieve the pain and insomnia:

R. Pot. bromidi gr. xx 1|30
Tinct. hyoscyami 3ss 2|
Tinct. lupuli℥i 4|
Aque camphoræ q. s. ad.℥i 30|

M. Sig.: Two tablespoonfuls at bedtime.

In chronic gout the following combinations are of service in increasing the elimination:

R. Liquoris arsenicalis m. iii 20|
Potassii iodidi gr. v 35
Syr. sarsap. co. 3ss 15|

Sig.: To be taken at one dose in a wine glass of water three times a day; or:

R. Lithii cit. gr. x 65
Potassii cit. gr. xv 1|
Tinct. colchici m. x 65
Syr. limonis℥i 4|
Aque q. s. ad.℥i 30|

M. Sig.: Two tablespoonfuls to be taken three times a day.

Dilatation of the Stomach.

According to the *Med. Press and Circular*, Professor Robin of Paris does not recognize the existence of dilatation of the stomach except as a consequence of spasm or contracture of the pylorus. However, in rare cases, he states the possibility of such occurrence from atony, or atrophy of the muscular coat. The most characteristic symptoms are epigastric undulation, tension of the same region, pain, regurgitation, eructations and vomiting. If these phenomena come on two hours

after eating, the pylorus is very probably the origin of, the cause. The medical treatment consists in the administration of alkaline solutions to diminish or destroy the hyperacidity of the gastric juice. The following combination is recommended:

R. Sodii sulph. 3i 4|
Sodii bicarb. 3ss 2|
Sodii chloridi gr. xx 1|30
Aq. q. s. ad. Oii 1000|

M. Sig.: Ten ounces to be taken in the morning while fasting, and in three parts, twenty minutes between each. The dose should be increased by two ounces every morning up to half a quart. Among other preparations may be mentioned olive oil, antiseptics, washing out the stomach, purgatives, massage and electricity.

Medicolegal.

Itinerant Doctors' Statute and Dentists.—By Section 700 of the Iowa code the power is given cities and towns to regulate, license and tax "itinerant doctors, itinerant physicians and surgeons," etc. The question was raised in the case of the City of Cherokee vs. Perkins whether a practitioner of dental surgery comes within the definition of itinerant doctor or itinerant physicians and surgeons. In answering this question, the Supreme Court of Iowa says that it has been held that the terms "dentist" and "surgeon" are not interchangeable. Certain it is that the professions are largely separate and distinct from each other. The practice of each is regulated by different chapters of the code, and the legal rights, duties and responsibilities of each are dissimilar in very many respects. If, therefore, the power to license and tax, given to municipalities by statute, is to be confined to "physicians and surgeons," then we note that the language can not be extended to include "dental surgeons." In the opinion of the writer of the Supreme Court's opinion (Bishop, J.), there is every reason for holding the statutes applicable to dentists which could be urged in respect of physicians and surgeons, and the legislature intended to include dentists in the general term "itinerant doctors." The majority of the court, however, hold to the opinion that the provisions of the statute can not be extended so as to include dental surgeons; that, if the legislature had intended to make them subject to the statutory provision, it would have so said in terms; that the expression "itinerant doctor," as found in the statute, is to be classed with the succeeding expression, "itinerant physician and surgeon"; and that both relate to those persons who in some form, or following some school, practice either medicine or surgery, or both.

Act of Insane Person—Committing Suicide.—The Supreme Court of Illinois says, in *Supreme Lodge Mutual Protection vs. Gelbke*, that the act of an insane man is not morally his act, so as to impose moral responsibility or render him amenable to the criminal law, because he is unable to understand his duties and obligations or to form a criminal intent; but the act would be his in fact if it was the result of his volition, although under a delusion. The suicidal act of an insane man is intentional if it is voluntary, with the purpose to take his own life, and with knowledge that such will be the effect of the act. Here there was an agreement in a contract of life insurance which provided for exemption from liability if the death of the insured should be caused by his own suicidal act, whether sane or insane, leaving nothing open, by its terms, except the question whether it was his act, and the Supreme Court holds that the provision rendered the certificate void if the insured committed suicide, unless he was in such a state of mind as to be unconscious of the physical nature of the act which caused his death. Again, it says that the word "suicide" and the words "to die by his own hand," or "by his own act," or "to take his own life," mean the same thing, and each conveys the idea of voluntary, intentional self-destruction. The agreement of the insured in this case was that, if his death should result from his own suicidal act, whether sane or insane, the insurer should not be liable; and, if he took the poison voluntarily, understanding the physical

mature and consequences of his act, with a purpose and intention to cause his death, it made no difference whether he was sane or insane, or whether his intent was rational or irrational. To hold that he must have formed a rational intention would be to make no distinction between an agreement for exemption in the case of committing suicide without any provision as to mental capacity and one like this. A rational intent is one founded on reason, as a faculty of the mind, and opposed to an irrational purpose.

Injury Developing Latent Disease—Delirium Tremens.

—The United States Circuit Court of Appeals, First Circuit, says that it appeared in evidence in Maguire and others vs. Sheehan, a personal injury case brought by the latter party, (1) that prior to his injury the man was in good health; (2) that the delirium tremens which retarded his recovery was caused by the shock of the injury; (3) that the violent acts which delayed the healing of the wound and the knitting of the bones were committed while in a state of delirium. More particularly it appeared in evidence that after the man was taken to the hospital delirium tremens ensued, and that while he was on his back, and should have remained in one position, in order that his leg might knit, this attack of delirium tremens rendered him practically insane, so that he moved about, tore his bandages, and even got out of bed, and that that delayed the knitting of the wound, and had prevented a recovery as complete as otherwise might have been had; in other words, that the man's previous alcoholic condition affected the injuries which resulted from the accident. The parties sued requested that the jury be instructed that, if the man voluntarily put himself in a physical condition where delirium tremens might easily be developed by the shock of an accident, he would be responsible so far as such condition prevented his recovery. They admitted the general rule that, where a personal injury develops a latent disease, the person whose negligence caused the injury is liable to respond in damages for the results of the disease, as well as of the original injury, but they insisted that a distinction should be made between different diseases. It was not denied that the rule applies to malaria, scrofula, rheumatism, erysipelas, cancer and lockjaw, but it was said that it did not apply to ailments which were caused by voluntary and intemperate habits. But the Court of Appeals, holding against the parties sued, says it is not aware of any such exception to the general rule. The difficulties of establishing such an exception are apparent. How far a latent disease, called into activity by an injury, is the result of the habits or voluntary acts of the injured, is a matter of speculation, and necessitates the investigation of difficult and occult questions of cause and effect, which lie outside the scope of judicial inquiry. Beyond general expressions in some decisions, which at most were mere dicta, there was no authority cited by the parties sued which supported their contention. As an almost universal rule, the courts have declined to recognize any such distinction.

Claims Against Estate—Attendance on Tenants.—In the case of Baker vs. Dawson, administrator, an action brought by a physician, the Supreme Court of North Carolina says that it was admitted that the physician rendered medical services within twelve months just prior to the death of the owner of the estate, as follows: (1) To deceased personally, \$347; (2) services to deceased's wife and child, \$84; to tenants of deceased, \$36. The physician sought to have all of the above adjudged to be preferred debts, under section 1416 of the North Carolina code, which places among the sixth class of preferred debts "medical services within the twelve months preceding the decease." This language, however, the Supreme Court says, contemplates only services rendered to the deceased personally; for the indebtedness is given priority if rendered within twelve months prior to his decease, and not within twelve months prior to the decease of his wife, child or tenant. As to them, the physician renders the services like any other creditor, relying on the credit of the person requesting the services that he will pay or can be made to pay. It must be noted that there is no priority, even for medical services rendered the deceased personally, unless he dies. In all other cases the physician's bill is like any other debt. If

the physician wishes to secure such debts he must exact security or proceed to collect by law. When the patient is in his last illness this might be inconvenient or indecent, and, as such illness might extend to twelve months, the law endeavors to secure for the patient medical attention by giving a legal priority for such services, if rendered to the patient within twelve months preceding his decease. But such reason does not apply to services rendered his wife and children, as to which the physician has extended credit, relying on the father or husband or landlord himself paying the debt incurred. There are no words extending the meaning to such debts other than personal services to the debtor, and the language of the statute is restrictive—"For medical services within twelve months prior to the decease,"—meaning the decease of the debtor, not of his wife, child or tenant. The statute, being in derogation of the equity of a pro rata, or proportionate, distribution, should be strictly construed, so as not to confer a priority over other creditors unless clearly called for. And the court says that the trial judge rightly disallowed any priority as to medical services rendered the tenants of the deceased, but erred in rendering judgment therefor, to be paid pro rata with other debts of the deceased, since it was not alleged or proved or admitted that the services were rendered to the tenants at the request of the deceased, and without this the landlord is not liable for such services. It says the judge also erred in adjudging that the bill for medical services rendered the wife and child of the deceased was a preferred debt. He should have rendered judgment for the amount thereof, to be paid *pro rata* with the other unpreferred indebtedness of the deceased.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Philadelphia Medical Journal, November 29.

- 1 *The Surgery of Brain Tumors from the Point of View of the Neurologist, with Notes of a Recent Case. Charles K. Mills.
- 2 *Some Experiments upon the Immunization of Cattle Against Tuberculosis. Leonard Pearson and S. H. Gilliland.
- 3 Methemoglobinemia Due to Acetanilid, but without Any Marked Constitutional Symptoms. Richard C. Cabot.
- 4 *The Local Use of Iodin in Corneal Ulcers. J. Lawton Hiers.
- 5 A Test-Tube Filler. F. E. Montgomery.

New York Medical Journal, November 29.

- 6 The Works of Edward Jenner and Their Value in the Modern Study of Smallpox. (To be concluded.) George Dock.
- 7 *Typhoid Fever and Drinking Water. A. Seibert.
- 8 *Tent Life in the Treatment of Tuberculosis. A. Mansfield Holmes.
- 9 Orthoform in the Diagnosis of Gastric Ulcer. Frank H. Murdoch.
- 10 Uric Acid Bothers. William S. Stoakley.

American Medicine (Philadelphia), November 29.

- 11 *The Importance of a More Careful Examination and Treatment of Women After Childbirth. B. C. Hirst.
- 12 *Some Facts Which Show that the Tuberculosis Bacillus of Human Origin May Cause Tuberculosis in Cattle, and that the Morphology and Virulence of the Tubercle Bacilli from Various Sources Are Greatly Influenced by Their Surroundings. E. A. de Schweinitz, Marion Dorset, and E. C. Schroeder.
- 13 *The Pathology of Katabolism in Relation to the Etiology and Pathology of Cancer and Allied States. (Concluded.) Homer Wakefield.
- 14 *A Further Contribution to the Study of Modern Amputations. W. L. Estes.
- 15 *The Use and Abuse of Bromids in the Treatment of Mental Diseases. A. R. Defendorf.
- 16 *Myxedema. B. C. Loveland.

Medical News (N. Y.), November 29.

- 17 Preventive Medicine. William A. Howe.
- 18 Reminiscences of Nearly Half a Century in Medicine and Surgery. Charles K. Briddon.
- 19 *The Hyoscin Treatment of a Morphine Habitue. Randle C. Rosenberger.
- 20 *Some Phases of Infantile Feeding. Edward T. Abrams.
- 21 *Appendicitis. Lewis S. Blackwell.
- 22 *Albargin or Gelatose Silver in the Treatment of Gonorrhea. Hermann G. Klotz.
- 23 *The Influence of Alcoholic Heredity in Diseases of Children. T. D. Crothers.
- 24 *The Early Diagnosis of Intussusception. F. Huber.

Medical Record (N. Y.), November 29.

- 25 *Paratyphoid Fever. N. E. Brill.
- 26 *Report of a Case of Successful Suturing of the Heart, and Table of Thirty-seven Other Cases of Suturing by Different Operators with Various Terminations, and the Conclusions Drawn. L. L. Hill.

- 27 *Hyoscin in the Treatment of Drug Habits. Howard C. Russell.
 28 *Inflammation and Perforation of Meckel's Diverticulum as a Cause of Septic Peritonitis, with a Report of Two Cases of Typhoid Perforation of Meckel's Diverticulum. A. E. Halstead.

Boston Medical and Surgical Journal, November 27.

- 29 *The Normal Appendix; Its Length, Its Mesentery, and Its Position or Direction, as Observed in 536 Autopsies. George H. Monks and J. Bapst Blake.
 30 *Six Cases of Rupture of the Intestines, with Four Recoveries. F. B. Lund, B. H. Nichols and Jno. T. Bottomley.
 31 *Some Cases Which Were Not Pernicious Anemia. John L. Morse.
 32 A Case of Poisoning by Thallium. William N. Bullard.
 33 *Tetany in Gastric Disorders. (Concluded.) Lawrence W. Strong.

Cincinnati Lancet-Clinic, November 29.

- 34 *An Improved Method of Circumcision. Louis J. Krouse.
 35 Gunshot Wound of the Abdomen. Perforations of Stomach and Duodenum; Operative Recovery. J. F. Baldwin.
 36 Surgery of the Prostate, Pancreas, and Diaphragm. (Continued.) B. Merrill Ricketts.

Virginia Medical Semi-Monthly (Richmond), November 21.

- 37 *Drainage After Abdominal Section. Stuart McGuire.
 38 Rheumatic Neuritis, or Tabes Dorsalis—Case for Diagnosis. John J. Taylor.
 39 *Curettement of the Uterus. Geo. Ben Johnston.
 40 *Puerperal Appendicitis. Edward Ricketts.
 41 *Gonococcal Auto-Reinfections from the Seminal Vesicles. Terry M. Townsend.
 42 Etiology and Treatment of Acne Vulgaris. F. H. Beadles.
 43 *Gant's Femoral Osteotomy. A. R. Shands.
 44 Fatal Secondary Hemorrhage from Umbilicus Eight Days After Birth. Ramon D. Garcia.
 45 The Present Day Mortality of Pneumonia. Alex G. Brown, Jr.
 46 An Original Method of Setting and Treating a Fractured Knee-Cap. R. Bruce James.

Medical Age (Detroit, Mich.), November 25.

- 47 *Etiology of Appendicitis. H. E. Randall.
 48 Climate and Electric Peculiarities of Colorado Favoring Recovery in Pulmonary and Other Diseases. J. E. MacNeill.
 49 *The Value of Hypnotism as a Therapeutic Remedy. G. M. Henderson.

St. Paul Medical Journal, December.

- 50 The Care of the Insane in Minnesota. Helen Bissel.
 51 *Leucocytosis in Pneumonia. Alexander Lambert and R. M. Daley.
 52 *The Radical Cure of Cancer of the Stomach. Wm. J. Mayo.
 53 Some Observations on Puerperal Eclampsia. J. B. McGaughey.
 54 A Case of Intestinal Obstruction with Some Special Features. Arnold Schwyzer.
 55 Trachelorrhaphy and Perineorrhaphy for Severe Injuries Received During Labor. George E. Putney.

Albany Medical Annals, December.

- 56 *Operative Interference in Epilepsy. Robert E. Doran.
 57 Cystitis. Charles B. Mallory.
 58 *Treatment of Cerebral Rheumatism by Cold Baths. M. Shellenberg.
 59 Report of Four Cases of Arterial Embolism of the Extremities. George H. Fish.

Iowa Medical Journal (Des Moines), November 15.

- 60 Surgery of Prostatic Obstruction. L. E. Schmidt.
 61 Stricture of the Esophagus Following Typhoid Fever. M. L. Turner.
 62 *Home Remedies. C. W. Miller.
 63 Sternal Dislocation of the Clavicle. L. Schooler.
 64 Eclampsia—Especially Etiology and Treatment. W. H. Rayner.
 65 Hemorrhagia Ventriculi. J. F. Richardson.
 66 The Appendix in 528 Autopsies. George Boody.

Proceedings of the Philadelphia County Medical Society (Philadelphia), November.

- 67 *The Nervous Symptoms of Chronic Bright's Disease. James H. Lloyd.
 68 *The Ocular Manifestations in Chronic Bright's Disease. G. E. de Schweinitz.
 69 Treatment of the Nervous Phenomena in Chronic Nephritis. James M. Anders.
 70 *The Etiology of Gastroparesis. Albert P. Francine.
 71 Preliminary Report on Experiments to Determine the Pressure in the Bile Ducts in Floating Liver. J. Dutton Steele.
 72 Diseases of the Rectum a Specialty. Herman A. Brav.

Woman's Medical Journal (Toledo, Ohio), November 15.

- 73 The Responsibility of the Surgeon in Caring for Patient. Anna Braunwarth.
 74 *Septicemia and the Curette. H. Plympton.
 75 Myoma of Broad Ligament. Kate S. Harpel.

Richmond Journal of Practice, September.

- 76 *Gonococcal Auto-reinfections from the Seminal Vesicles. Terry M. Townsend.

- 77 *De-Extensive Intra-pelvic and Man by Incising the Perfrom the Prostate and Blad-o-vesical Pouch of the Peri-
 78 *Pu
 79 *Cu

Clinical Review (Chicago), December.

- 80 *Surgery of the Stomach for the Relief of Non-malignant Pathological Conditions. A. J. Ochsner.
 81 Appendicitis. Robert T. Morris.
 82 Typhoid Fever. Norman Bridge.

Chicago Medical Recorder, November 15.

- 83 *Peritoneal Adhesions. Robert T. Morris.
 84 *The Treatment of Typhoid Fever. Henry B. Favill.
 85 Bloodless Reduction of Congenital Dislocation of the Hip-Joint and Demonstration on Several Cases. Adolf Lorenz.
 86 The Armour Case. Professor Lorenz's Operation for Congenital Dislocation of the Femur. John Ridlon.
 87 Neuroretinitis Due to Disease of the Kidney. Henry Gradle.
 88 Massage and Gymnastics in Gynecology. George Rubin.

Toledo Medical and Surgical Reporter, December.

- 89 The Treatment of Contagious Diseases. W. W. Brand.
 90 The Care of Smallpox Patients. James J. LaSalle.
 91 *Septicemia and the Curette. H. Plympton.
 92 Relation of the Local to the State Board and Duties of the State Board. W. C. Chapman.

Medical and Surgical Monitor (Indianapolis), November 15.

- 93 *The Roentgen Ray in Obstetrics. Joseph B. Cooke.
 94 Injuries of the Abdomen. Samuel L. Ensminger.
 95 *Phthisis Pulmonalis—It Is a Curable Disease. J. W. Crismond.
 96 Electrical Injuries. J. R. Fattie.
 97 A Report on Four Cases Treated by Anesthesia. Simon P. Scherer.

Medical Sentinel (Portland, Ore.), November.

- 98 Organization of the Medical Profession. J. T. Murray.
 99 Was Harry Tracey Insane? Henry W. Coe.
 100 The Prophylaxis of Variola. C. A. Cordier.
 101 Some Observations on the Treatment and Prevention of Catarrhal Deafness in Children. Hicks C. Fenton.

Ophthalmic Record (Chicago), November.

- 102 Report of a Case of Spontaneous Perforation of the Cornea, in the Center of a Macula Which Had Existed for More Than Six Years, the Perforation Not Closing Until the Twentieth Day. C. A. Veasey.
 103 *A Simple and Effective Method of Determining the Degree of Deviation in Squint. Nelson M. Black.
 104 *The Correction of Myopia. A. C. Friedmann.
 105 *The Full Correction of Myopia. Edward Jackson.
 106 Aspergillar Keratitis. E. C. Ellett.

Canada Lancet (Toronto), December.

- 107 The Asylum, the Hospital for the Insane, and the Teaching of Psychiatry. Stewart Paton.
 108 Clinical Notes on Gynecological Cases at the Samaritan Hospital for Women, Montreal. A. Laphorn Smith.
 109 Three Cases Presented by Dr. James Stewart before the Canadian Medical Association. Malcolm Mackay.
 110 *The Diagnosis of Diseases of the Gall Bladder and Bile-Ducts. Alexander McPhedran.
 111 *The Medical Treatment of Diseases of the Biliary Passages and Gall Bladder. A. D. Blackader.
 112 Notes on Mastoid Operations. A. B. Osborne.

Journal of Cutaneous and Genito-Urinary Diseases (N. Y.), December.

- 113 *Epidermolysis. W. Wenda.
 114 *Four Forms of Dermatitis (Erythrodermia ex). John T. Bowen.
 115 A Case of Zoster. Not Followed by a General Herpes. ch Was Also Seg-ch.
 116 Gonorrheal C. ick Griffith. lid Glove. Freder.

Medical Examiner and Practitioner (N. Y.), November.

- 117 Location in Its Bearings on Life Assurance. Ira W. Porter.
 118 Mortality and Its Cost. O. Millard.
 119 Occupations. R. E. Moss.
 120 The Medical Treatment of Pulmonary Tuberculosis. George D. Barney.
 121 The Medical Aspect of Life Insurance. L. Amster.
 122 Some Practical Observations on the Diagnosis and Prognosis of Cardiac Disease. L. E. H. H. H.
 123 *Septicemia and the Curette. H. Plympton.

Laryngoscope (St. Louis), November.

- 124 *Choroiditis Cantorum: A Contribution to the Study of the Etiology, Pathology and Treatment of Singers' Nodes, or Nodules on the Vocal Chords. F. E. Miller.
 125 *Benign Tumors of the Nasopharynx. Francis J. Quinlan.
 126 Thrombosis of the Lateral Sinus and Internal Jugular Vein, with Reinfection of the Sinus After Ligation of the Vein. M. D. Lederman.
 127 *Rapid Dilatation and the Prolonged Use of Intubation Tubes in Stenosis and in Centric Occlusion of the Larynx. Report of Two Cases. J. Payson Clark.
 128 A New Device for Syringing the Ear. Lewis G. Langstaff.

Kansas City Medical Record, November.

- 129 Preventive Medicine. E. E. Gilmore.
 130 Rabies. T. C. Bouliware.
 131 *Septicemia and the Curette. H. Plympton.

Canadian Practitioner and Review (Toronto), November.

- 132 Landmarks in the Uterus. Byron Robinson.
 133 Insanity: Its Causes and Remedies. James Russell.
 134 Case of Intestinal Obstruction. Everett S. Hicks.

International Medical Magazine (N. Y.), November.

- 135 *The Etiology of Cancer. A. Robin.
- 136 *Cancer of the Rectum. Samuel G. Gant.
- 137 *The Treatment of Malignant Disease by the Roentgen Rays. Charles L. Leonard.
- 138 *The Destruction of Cancerous Growths and Sterilization of the Surrounding Tissues by Mercuric Cataphoresis. G. Betton Massey.
- 139 Observations on Skin Cancer, with Remarks on Its Treatment by Cauterization and Excision. Levi J. Hammond.
- 140 Carcinoma of the Upper Respiratory Tract. E. B. Gleason.
- 141 Carcinoma and the Nervous System. F. Savary Pearce.
- 142 The Diagnosis of Gastric Cancer from Round Ulcer. Boardman Reed.

Alabama Medical Journal (Birmingham), November.

- 143 Crime and Its Causes. H. L. Appleton.
- 144 *Septicemia and the Curette. H. Plympton.
- 145 Child Labor—A National Curse. J. Lawton Hiers.
- 146 A Case of Bright's Disease Benefited by the Use of Apocynum Cannabinum. R. B. Paine.
- 147 Treatment of Typhoid Fever. O. L. Shivers.

Southern California Practitioner (Los Angeles), November.

- 148 Medical and Edible Plants of Southern California. Laura E. King.
- 149 *Treatment of Pneumonia. Frank W. Thomas.
- 150 Cystic Degeneration of the Chorion with Report of Two Cases. Hoell Tyler.
- 151 European Surgery. Andrew S. Lobingier.
- 152 Enteroptosis. Oscar J. Kendall.

Medical Times and Register (Philadelphia), November.

- 153 Extrinsic Lesions of the Spine, Dependent on Traumatism. Thomas H. Manley.
- 154 *Septicemia and the Curette. H. Plympton.

Mobile Medical and Surgical Journal, November.

- 155 Two Cases Illustrating the Correction by Operation of Deformities Produced by Infantile Paralysis. Michael Hoke.
- 156 Indications for Operation in Mastoid Empyema. S. Kirkpatrick.
- 157 A Brief Visit to "Surgical" Chicago. W. R. Jackson.
- 158 Uricacidemia. B. F. Coleman.
- 159 *Stone in the Kidney, with Report of Two Cases. Mack Rogers.

New Orleans Medical and Surgical Journal, December.

- 160 Topography of the Ureters. Byron Robinson.
- 161 What Should Be Done to Spread a Better Knowledge of Skin Diseases, and Thereby Reduce to a Minimum the Errors in Diagnosis. J. N. Roussell.
- 162 Circumcision for Chancroid and Other Causes. P. L. Belenger.
- 163 Two Hundred Accidental Injuries. R. W. Seay.
- 164 A Case of Gunshot Wound of the Abdomen, with Remarks. W. E. Parker.
- 165 Chronic Varicocele, Superinducing Pronounced Hypochondriac Symptoms—Excision (Howse-Bennett-Parker Method). Burdett A. Terrett.

Columbus Medical Journal, November.

- 166 The Lacerated Perineum and Cervix. Joseph S. Rardin.
- 167 Anatomy of the Pleurae. Charles W. McGavran.
- 168 Pleurisy—Pathological Anatomy. G. W. Rogers.
- 169 Treatment of Pleurisy. C. A. Howell.
- 170 Laryngismus Stridulous. Elmer T. Kuhn.
- 171 The Importance of Objective Symptoms in Orthopedic Surgery. William L. Dick.

Pediatrics (N. Y.), November 15.

- 172 *Fixation, the Essential of Treatment for Tubercular Joint Disease. Edward A. Tracy.

1. **Brain Surgery.**—Mills believes in operation for brain tumors in carefully chosen cases notwithstanding the large percentage of failures, which he attributes to the errors of localization, lack of exactness in the cranial areas, excessive hemorrhage, contusions of the brain, prolongation of operations and the disturbance of the balance of pressure in the skull. The record as to localization is increasing favorably and the Roentgen rays are material assistants, becoming more and more important. He prefers the Anderson-Makins method of locating the chief craniocerebral landmarks. These writers suggest 1, a median sagittal line, from the glabella to theinion; 2, a frontal line from the midsagittal point to the depression just in front of the ear at the level of the upper border of the meatus; 3, a squamosal line, from the most external point of the external angular process, at the level of the superior border of the orbit, to the junction of the middle and lower thirds of the frontal line, and prolonged for about an inch and a half behind the frontal line. The upper extremity of the central fissure was found by them to lie between the midsagittal point and a point three-fourths of an inch behind it, and the lower extremity of this fissure they located near the squamosal line about three-fourths of an inch in front of its junction with the frontal line. The commencement of the lateral portion of the Sylvian fissure is not at a definite fixed point, but can be usually

found at a point one and a half to two inches behind the angular process, the course of the horizontal portion of this fissure corresponding closely to the squamosal line. The parieto-occipital notch is placed at a point seven-twelfths of the distance from the midsagittal point to theinion. The longitudinal sinus frequently deviates toward the right side in the caudal portion of its course. It is Mills' custom not only to locate the position of the tumor where possible, but also to fix the limits and direction of the osteoplastic flap which it seems most desirable to make. He prefers the Stellwager trephine to the ordinary trephine, the rongeur, the mallet and the chisel, as it saves a great deal of danger from concussion of the brain. For cerebellar tumors he remarks the best operation is one in which the interfering neck muscles are turned back and a good opportunity thus afforded for the scalp-flap and the ordinary trephine. If great care is taken in placing this trephine, the sinuses can be generally avoided and the opening enlarged by the rongeur so that a tumor confined mainly to one lateral lobe of the cerebellum may be removed. Unfortunately these tumors arise generally in the middle lobe and the peduncles and present unsurmountable difficulties. The proximity of the great sinuses adds difficulties to cerebellar operations. He details Keen's opinions in regard to the method of reaching the tumor in these parts. He speaks also with favor of controlling hemorrhage by compression of the carotids as suggested by Crile. In conclusion he reports a case of localized meningitis and gumma of the motor region—diagnosed by clinical study and the Roentgen rays, and successfully operated on. The article is well illustrated.

2. **Tuberculosis.**—Pearson and Gilliland briefly report experiments made by them with bovine and human tuberculosis in the inoculation of cattle. They conclude from their research that they are justified in assuming that after repeated intravenous injections of cultures of tubercle bacilli from human sputum the resistance of young cattle to virulent tubercle bacilli of bovine origin may be increased to such an extent that they are not injured by inoculation with quantities of such cultures which are otherwise capable of causing death or extensive infection. That intravenous injections of much larger quantities of culture of human sputum tubercle bacilli than are necessary to confer a high degree of resistance or immunity on the vaccinated animal, may be employed without danger to that animal. They are experimenting as to the proof of this immunity and the extent to which it is effective in protecting cattle against infection from natural causes and also as to the minimum quantities of culture of non-virulent tubercle bacilli which will serve to produce immunity.

4. **Iodin in Corneal Ulcers.**—Hiers reports a case of the use of iodine in corneal ulcers and remarks that since the beginning of his use of this medication he has treated something over two hundred cases, both those of the phlyctenular variety and those of traumatic origin. He concludes that the special adaptability of iodine, used in the tincture form, is to ulcers of the indolent type. It lessens rather than increases scar tissue. The majority of cases yield readily to its first employment.

7. **Typhoid Fever and Drinking Water.**—The causes of typhoid fever are discussed by Seibert, who notices the seasonal effect on its occurrence as shown by figures of New York City and the Prussian Army, two widely separated localities, with largely the same factors at work. He also gives diagrams showing the typhoid mortality in various cities, some of which are quite striking, especially those of Hamburg, Berlin and other German cities before and after filtration was introduced. It seems evident from this that the chief source of typhoid infection is the pollution of drinking water. In summing up the results of his investigation, he offers the following in substance: All rivers, brooks, creeks and lakes located in populated districts of the United States and Germany have long since become permanently infected by typhoid bacilli. The chief carrier of the typhoid germ is drinking water of the cities and towns, and all cities and towns which are compelled to take their drinking water from such sources are in duty bound to cleanse the same by central sand filtration at the waterworks.

8.—See abstract in *THE JOURNAL* of October 25, p. 1066.

11. **The After-Treatment of Childbirth.**—Hirst thinks that it would be an inestimable blessing to child-bearing women if every physician who laid no claim to special skill in gynecic surgery would have his patients inspected by a specialist shortly after labor and again at the end of the puerperium.

12. **Human and Bovine Tuberculosis.**—De Schweinitz, Dorset and Schroeder report experiments with the inoculation of animals with human tuberculosis bacilli and claim that there can be no doubt that the latter can produce the disease in cattle. The artificial media on which the cultures are made affect the morphologic appearance of the bacilli as well as their virulence.

13. **Cancer.**—Wakefield's conclusions are too lengthy to be reproduced. He holds that the cause of degenerative growths is what he calls sub-katabolism. Cancer is not necessarily a parasitic disease. When bacteria become causative factors they do so acting either as irritants, or by their acid excretions, acting directly and in conjunction with sarcolactic acidity. Cancers are prone to infection, though not more so than other forms of sub-katabolism. He defines this sub-katabolism as a retardation of normal katabolism due to lack of actual alkali and oxidation.

14. **Amputations.**—Estes gives an analysis of a large number of amputations both single and multiple. With the exception of amputations through the thigh above the lower third, there has been no death following amputation in these cases, which is a notable improvement on his former experience as reported by him in 1894. The very high mortality of amputations of the upper third of the thigh is also remarkable. He remarks on the fact that hip amputations, which are usually considered so formidable, showed no greater mortality than those of the upper portion of the thigh. The only difference in the condition and treatment was that in the latter cases the tourniquet is used and in the former the amputation is done by gradual dissection, with careful hemostasis during every step of the operation by means of hemostats. The greater length of time required by this method, he thinks, is not necessarily conducive to fatality and the non-necessity of constriction in a general way is an advantage.

15. **Use and Abuse of Bromids.**—Defendorf calls attention to the danger of the overuse of bromids and their habitual over-employment in insanity. He thinks that if necessary to employ them, they should be alternated with other hypnotics, which is a good rule for all sedative or hypnotic drugs.

16. **Myxedema.**—Loveland reports two cases and calls attention to certain points of diagnosis. Both patients lacked the commonly seen skin pigmentation. In the first case a nervous shock seemed to be very obviously the cause; in the second there was a history of glandular inflammation in the throat, in which the thyroid was probably involved. The slow and weak pulse was also noted. He calls particular attention to the character of the voice in these cases which can not be accurately described, but must be heard to be appreciated. Both cases were improved by thyroid treatment.

19. **Hyoscin in Treatment of the Morphin Habit.**—The case reported by Rosenberger was treated by the total withdrawal of morphin and large doses of hyoscin at short intervals; 1/100 of a grain being given every hour for four and one-half days at one period. The patient was apparently delirious or semi-delirious for several days. The hyoscin was kept up for fourteen days altogether, during which time the patient had taken 1 and 22/25 gr., followed later by 1/30 gr. of nitrate of strychnia four times daily. The favorable results of the case impressed the author with the value of this form of treatment.

20. **Infant Feeding.**—The indications for the variation of sugar, fats and proteids in infant feeding are given by Abrams as follows: 1. If the bowel movements are curdy we may take it as an indication of an excess of proteids. 2. Sour vomiting indicates too much fat. 3. Stools that are very watery but without curds may depend on too much sugar or too much fat. 4. Vomiting of hard curdy masses may indicate too much pro-

teids. 5. Should the child seem to do well on the mixture in every way except that it does not gain in weight, then the sugar may be too low. 6. Vomiting may mean that the child has eaten too much. These rules are not absolute, but they are sufficiently correct for a guide. He sums up by concluding that:

1. Breast milk is the best infant food.

2. That no artificial food can or should be trusted which does not contain the essentials of breast milk, viz.: fat, proteids and sugar.

3. That the elements named are to be found only in milk, cow's milk being the only one available for general use.

4. That cow's milk must be modified because it does not contain the same proportions of the elements named.

21. **Appendicitis.**—Blackwell notices the frequency of appendicitis and the importance of its diagnosis. The recognition of the fact that one-half the cases recover under medical treatment should, in a measure, lead to deliberation and restriction within legitimate bounds of operative procedures.

22. **Albargin.**—This substance, which is said to be composed of nitrate of silver in gelatose, containing 15 per cent. of the silver nitrate, has been employed by Klotz in gonorrhea with very good results. He finds that in small doses of 1 to 2/1000 it is non-irritating, but he would not assume responsibility for the effects of strong solutions of one-half to 1 and 2 per cent., though he has never seen trouble from it himself. He is inclined to consider the drug as coming near to Neisser's idea of an ideal gonorrheal gonococcicide and that it deserves a trial.

23. **Alcoholic Heredity in Children.**—Crothers notices the condition in children characterized by feeble vitality and degeneration of the cell and nerve function and the special affinity of the brain centers for stimulants and narcotics as the result of heredity in children of alcoholic parentage. He gives the general principles which should govern the treatment of such cases, absolute abstinence from all alcoholics and narcotics and from meats on account of their stimulating character. A hygienic treatment consisting in everything that can build up the system and avoid brain and nerve stimulation is required, with careful guarding against all extremes.

24. **Intussusception.**—The chief sign for early diagnosis is given by Ruber as the characteristic colic. Next is noticed more or less change in the facies of the child; vomiting sets in, followed by the escape from the rectum of blood or bloody mucus, and more or less collapse. A swelling or rather fulness is noted in the right iliac fossa, particularly during the colicky attacks. This symptom-complex is characteristic, and if the possible occurrence of intussusception is kept in mind an early diagnosis can be made without difficulty.

25.—See abstract in *THE JOURNAL* of November 8, p. 1205.

26. **Heart Wounds.**—Hill reports an interesting case of wounds of the left ventricle, three-eighths of an inch in extent, causing severe hemorrhage, treated with catgut suture and ending in recovery. He gives an analytic table of the cases that have been reported, and concludes from his own experience and a review of the cases tabulated, that any operation which reduces the mortality of a given injury from 90 to about 63 per cent. is entitled to a permanent place in surgery, and that every wound of the heart should be operated on immediately. In any case where there is a suspicion of a wound of the heart exploratory operation should be performed at once. Unless the patient is unconscious and the corneal reflex abolished, an anesthetic should be given, preferably chloroform. Struggling is liable to produce a detachment of the clot and renew the hemorrhage. Never probe the wound, as serious injury may be inflicted on the myocardium. Rotter's operation renders access to the heart extremely easy, and should be generally adopted. Steady the heart before attempting to suture it, either by carrying the hand under the organ and lifting it up, or, if the hole is large enough, introduce the little finger as did Parozzani, which will serve the double purpose of stopping the bleeding and facilitating the passage of the stitches. Catgut sutures should be used, as wounds of the heart heal in a remarkably short time, and they should be interrupted, introduced and tied during diastole, and not involve the endocardium. As few as possible should be passed, preventing leakage, as they cause a degeneration of the muscular fiber, with its tendency to dila-

tation and rupture. In cleansing the pericardium it should be sponged out, and no fluid poured into the sac. Perfect cleanliness should be secured excepting in cases where instant intervention is required. The wound in the pericardium should be closed, and if symptoms of compression appear, reopened and drained.

27. **Hyoscin in Drug Habits.**—Russell reports a case treated by hypodermics of hyoscin at comparatively long intervals, not one of the cases where they were given every hour, such as have been reported. The results seemed to be good.

28. **Perforation of Meckel's Diverticulum.**—Halstead reports two cases and discusses the literature, finding only two similar cases of typhoid perforation. He remarks that in none of the reported cases was the cause of the symptoms recognized before the abdomen was opened.

29. **The Normal Appendix.**—From their observations, Monks and Blake deduce the following conclusions:

1. **Length.**—The average length of the appendix in men, women and children, indiscriminately, is 7.9 cm. (3 inches); the extremes being 1 cm. (a little over 1-3 of an inch) and 24 cm. (a little over 9 1-3 inches).

There is apparently no relation between the length of the body, the sex or age of the subject, and the length of the appendix, except that children are apt to have an appendix proportionately longer than adults.

2. **Mesentery.**—Fully one-half of all appendices have a mesentery (meso-appendix) which reaches nearly or quite to the tip. Of the other half by far the greatest proportion have mesenteries reaching as far as the middle point of the appendix or beyond it. Occasionally an appendix has no mesentery at all.

3. **Position (or Direction).**—The commonest position for the appendix is "down and in" (that is, toward the pelvis), the appendix very frequently hanging over the brim. The second commonest position is "behind the cecum." The third is "down" and the fourth is "in." The appendix is in one of these four positions in about three-quarters of all cases.

30. **Rupture of the Intestine.**—Six cases are reported here, including four recoveries. In one there was no evidence of direct contusion of the abdominal wall. It seemed to be a case of rupture from within and the results of a sort of contrecoup. The most important factor in these cases is the length of time allowed to elapse between the accident and the hour of operation. Beyond the fourth or fifth hour every hour of delay adds greatly to the danger of a fatal issue.

31. **Pseudo-Pernicious Anemia.**—The cases reported by Morse which justified the clinical diagnosis of pernicious anemia were found due to malaria and to hemorrhages from hemorrhoids and the bladder. He calls attention to the importance of looking for slight and frequent hemorrhages as a cause of this condition.

33. **Gastric Tetany.**—The chief part of Strong's paper is a critical discussion of the literature and the opinions in regard to the subject. He summarizes as follows:

1. The condition is a symptom-complex, indicative of an increased nervous irritability, probably central in location.

2. The muscular spasm is a reflex phenomenon set loose by some mechanical stimulation, as vomiting or lavage, with possibly a direct action, in the case of pressure and electrical stimulation of peripheral nerve trunks. The spasm, however, can not be produced without the antecedent nervous irritability.

3. The chief factor in the diagnosis is the muscular spasm itself, affecting the arms in a characteristic manner. Other symptoms, while usually present, are not of absolute diagnostic value.

4. The etiology of the underlying nervous hyperirritability is unknown. The theory of intoxication is the only one adequate to explain the condition.

34. **Circumcision.**—The method here described and illustrated by Krouse consists in perforating the prepuce over the corona and cutting down from the top on a grooved director from this perforation to another similar one on the side of the frenum, repeating this on the other side and finishing the incision below. He obtains the best results from this method.

37. **Drainage in Abdominal Section.**—The conditions requiring drainage are summed by McGuire as follows: 1. In uncontrollable bleeding, as after enucleation of an intraligamentous cyst. 2. When profuse serous transudation is probable, as after the removal of a large adherent ovarian tumor. 3. When localized collections of pus are found, as in case of an appendiceal abscess. 4. When acute general peritonitis exists. 5. When protective adhesions are desired, as in drainage of the gall-bladder. 6. When secondary infection is feared, as in some cases of intestinal lesions. He describes the different forms of drains, including his own, a soft gum tube surrounded by numerous strands of cordine in a casing of thin

rubber tube. The inner tube projects beyond the cordine and the latter beyond the outer tube.

39. **Curettement of the Uterus.**—The rules formulated by Johnston are: 1. Have a distinct and sufficient reason for the procedure. 2. Observe a most scrupulously perfect technic as to asepticism. 3. Dilate the cervix slowly and thoroughly under anesthesia. 4. Apply the curette with great gentleness, but completely and thoroughly removing all diseased tissues. 5. Conduct the subsequent dressings and after-treatment with the same rigid care that appertains to other surgical operations.

40. **Puerperal Appendicitis.**—The following are the conclusions of Ricketts' article:

1. That puerperal appendicitis is as distinct as salpingitis, with or without pus. 2. It can be diagnosed and differentiated from a puerperal septicemia due to other causes. 3. That many cases of peritonitis arise from the infected appendix, and not from the results of pregnancy and child-birth. 4. The reason that puerperal appendicitis has been overlooked explains why it is claimed that appendicitis is more frequent among males than females. 5. With puerperal appendicitis recognized the disease will be found as often among women as among men.

41. **Gonococcal Reinfections from the Seminal Vesicles.**—According to Townsend, spermato-cystitis is a frequently overlooked complication of gonorrhea and a prolific cause of recurrent gonorrhea. A differential diagnosis from acute gonorrhea can be made and is essential to correct treatment. Clear urine may often be seen while gonococci abound in the seminal vesicles. Especially careful examination and observation of these organs should be made before assurance of cure and before consent to marriage is given.

43. **Gant's Femoral Osteotomy.**—This operation is recommended by Shands as deserving more general adoption. It consists in a subtrochanteric osteotomy, and he gives the details of the technic as follows:

The field of operation having been rendered aseptic, a sand bag is placed between the thighs and pressed firmly against the perineum by an assistant, who at the same time holds the patient on the side; the osteotome is introduced in the long axis of the femur about a finger's breadth below the trochanter minor and by manual force is forced down to the bone. No scalpel is used. The osteotome should be sharp enough to cut its own way through the soft structures with light pressure. As soon as the bone is reached, one gentle tap of the mallet will cut through the periosteum; the instrument is then turned in the transverse axis of the bone under the periosteum, which makes the operation subperiosteal as well as subcutaneous. A few blows with a mallet will force the osteotome into the medullary cavity; the instrument is then partly withdrawn and tilted so that a few more blows from the mallet will divide the upper fragment of the bone; and after the same has been done for the lower fragment, the fracture can be easily completed by manual force. Great care should be had not to use sufficient force to break up the adhesion of the head of the femur to the ilium, or to splinter the shaft of the femur at the seat of the operation. The only local dressing used is a piece of gauze and a small strip of adhesive plaster to hold it in place. The limb is put up in a plaster of Paris spica extending from the nipples to the toes, after bringing the limb into the best possible position obtainable.

When the limb is flexed to a right angle on the thigh, and often when not so much distorted, the muscles inserted about the anterior posterior spinous process and the fascia lata will have to be divided before the limb can be brought into its proper position; this can be done subcutaneously and adds nothing to the gravity of the operation.

47. **Appendicitis.**—Randall considers that appendicitis is due to previous bowel trouble. He notices the frequency of appendicitis in returned soldiers from the Philippines, while they suffered very little there from it. As long as the flux continued the appendiceal trouble did not seem to develop, but it is a later consequence.

49. **Hypnotism.**—Henderson thinks that hypnotism is of value in treating the insane, though it is very uncertain. It has, however, a tendency to increase delusions, and it should be used only in selected cases. He considers it specially indicated in the treatment of so-called "semi-conscious pain," which he illustrates by cases, while its employment would be wrong in some forms of hysteria. He insists on the importance of differentiating hysterical paraplegia from actual organic disease in these subjects, as hypnotism is not good for this special hysterical symptom. In conclusion he remarks: "Always have the full consent of the patient and have some responsible friend or relative of the patient present. Do not try experiments, but use it legitimately."

51.—See abstract in THE JOURNAL of November 8, p. 1205.

52.—Ibid.

56. Epilepsy.—Doran, who is first assistant at the Craig Colony, reviews the results of operative interference in epilepsy from the data in the literature and his personal experience. He classifies the operations under three headings: 1. Those undertaken with the expectation of removing the source of irritation in the brain. 2. Those done on the theory that the disease is caused by some abnormality of intracranial pressure or circulation. 3. Those promoted by a belief in the reflex origin of epilepsy. In the first group various operations such as trephining for cysts and tumors in the brain are included. In the second belong tapping and drainage of the cerebral ventricles, ligature of one or both vertebral arteries, etc., while in the third class are a great variety of procedures, such as cutting eye muscles and all the numerous operations for eye-strain, removal of nasal and other growths, division of the sympathetic, excision of the cicatrices, castration, circumcision, oophorectomy, etc. Many of these operations are no longer in use, though he does not condemn them entirely. Reflex epilepsy is undoubtedly rare, yet all possible sources of reflex irritation should be sought for and treated, and the patient should have the benefit of the doubt if there is a possibility of the operation being helpful, and if it is not too dangerous. He does not feel much enthusiasm from the results in his experience. Considerable operative work has been done at Craig Colony with results that have not been altogether satisfactory. The experience of recent years has done much to fix the limitations of the operation of trephining. Of the 29 cases trephined at the Colony either before or after admission, the result in those trephined before can be estimated by the fact of their admission, and these include 24 cases. Of 5 cases trephined at the Colony, 2 were done too recently to be mentioned. The records of the other 3 are given, and in no case did they show a cure, though there was a temporary or partial benefit in 2. In one there appears to have been little benefit from the operation. These were all reoperations, having been previously operated on before admission, and they were all kept under medical treatment after operation. To this is attributed the partial good results in at least one case. These results are not encouraging and show the futility of late operations. The earlier after the onset of epileptic symptoms the better the chances. Cases should be selected with great care and studied from both the medical and surgical standpoints. Partial epilepsy is not altogether an indication, and the question of heredity should be considered. The second operation specially noted is that of oophorectomy. Doran says that when everything else has been tried, and the patient is becoming worse morally, mentally and physically, and especially when erotic tendencies are present, which make it dangerous to allow her any liberty, and the attacks are worse and occur more frequently at the menstrual period, and still more so when there is ovarian disease which would justify operation in a non-epileptic patient, there certainly can be no harm in removing the ovaries. Four cases are reported. In one there seemed to be good results, but there had been long periods of freedom from the disease before, and there was a source of irritation in the diseased organs which justified operation. In the others there was improvement, but it is too early yet to judge of the results. He thinks that many so-called cures resulting from operation have been reported too soon, though if the patient goes three years without convulsion, we may perhaps consider it a recovery. Too much dependence must not be placed on the operation itself. The patient's general health should be watched, the diet regulated, and the bromid treatment used if it is possible to benefit the condition. It is of special importance also that the patients should abstain from alcohol, their habits be carefully regulated and that they should be kept from all forms of excess and all mental and physical overexertion.

58. Cerebral Rheumatism.—The value of cold baths in cerebral rheumatism is discussed by Shellenberg, who thinks that even with excessive hyperpyrexia and cerebral complications there has been a high mortality, and it is possible that by resorting to the bath the fatal issue may be avoided.

67. Chronic Nephritis.—The nervous symptoms of chronic Bright's disease are noticed by Lloyd, who divides them into those which manifest themselves, first, in the regional, and

second, in the general way. By regional he means affections of the cerebrum; by general, those that impair the general tone or the whole nervous system so as to constitute a symptom-complex that is not unlike the general state known as neurasthenia. Of the former he remarks that they are manifested almost exclusively in the brain. There are few, if any, spinal or peripheral affections caused by derangement of the kidneys, and this may be taken as a general law. The one exception is in the optic nerve, but it is practically a prolongation of the cerebral axis. Headache is a symptom of very grave importance. He does not say that it is common, but it is frequently overlooked. There is no other symptom which should do more to teach us the rule that every patient should have the benefit of a urine analysis. There is only one type of headache more obscure and intractable; that is the morning headache of gout. Distinction between the two is sometimes difficult. The headache of Bright's disease, however, is rarely so isolated a symptom. There is generally some associated failure of health, appetite and strength and generally a neurasthenic state. There may be nausea and vomiting with it so as to simulate migraine, as may also the eye symptoms. Only a very careless observer, however, would confound the two. Some authors refer to deafness, with associated giddiness, as being caused by Bright's disease and seem to think the auditory nerves are probably affected, but this is largely speculative. Among the most striking regional symptoms, which are often preceded by headache and amblyopia, are uremic convulsions as well as minor convulsions and stupor. There is nothing absolutely distinctive about the convulsion and coma of uremia and the diagnosis must be made by the process of exclusion and history of the case, and examination of the urine, and even then some of these factors are so uncertain that an accurate diagnosis is often difficult. He gives illustrative cases and shows how a physician may be discredited by his diagnosis. The brain symptoms may closely resemble those of organic disease within the cranium, and the closest study may be required. We must remember, however, that albumin and tube casts do not exclude tumor. He refers to Dr. Riesman's paper at Saratoga on uremic aphasia (*THE JOURNAL*, October 11), and accounts for such on the theory of a vascular lesion. A predisposing focal lesion in the brain and uremic poisoning in the blood in addition may act as a paralyzant on the starved tissue. In conclusion he calls attention to the curious hysterical and neurasthenic symptoms which sometimes occur, especially in the early course of Bright's disease. He thinks that such patients are sometimes given rest treatment, as being purely neurotic. The only safe rule is to make a clinical examination of the urine.

68. Ocular Manifestations in Nephritis.—De Schweinitz reviews the various forms, first enumerating them, including complete blindness, the various types of retinitis and neuroretinitis, alterations in the caliber and relation of the retinal vessels owing to sclerotic changes in their walls, with or without hemorrhages and exudates in the retina, alterations in the uveal tract, some varieties of cataract, paresis and paralysis of the ocular muscles, especially the superior oblique and the external rectus, and recurring subconjunctival hemorrhages. These are discussed at length. He thinks fully 25 per cent. of the cases of chronic Bright's disease in general hospitals are affected by various forms of retinitis. The prognosis as regards life is bad with these conditions, and remarks are made as to the close resemblance between cerebral tumor symptoms and those of Bright's disease in certain cases. He also thinks the recurring subconjunctival hemorrhages ought to receive consideration among the ocular signs of nephritis.

70. Gastropnoia.—While the etiology of this and associated conditions is difficult to explain, Francine recognizes two sets of causes: the predisposing and the exciting. The former are congenital weakness and hereditary predisposition. Among the most frequent of the latter are tight-lacing, rapid emaciation, disease of the abdominal integuments, or anything that constricts the thorax or enlarges the capacity of the abdomen. Enteroptosis, or more specifically coloptosis, is generally agreed to be the primary factor physiologically and to precede the gastropnoia. The kidney and liver follow later. In other

words, there is a vicious circle in which the abdomen and hepatic flexure are first involved and secondarily the stomach and kidney. Late investigations seem to point to the liver as the primary factor in many cases of enteroptosis, and there is little doubt that it would be impossible for the intestine to remain long in place after dislocation of the liver. Chlorosis and neurasthenia should be looked on as manifestations of a common underlying cause, supposedly constitutional weakness or faulty development, rather than as direct causative factors.

74.—See editorial in *THE JOURNAL* of November 22, p. 1327.

76.—See also title 41, above.

78.—*Ibid.*, 40, above.

79.—*Ibid.*, 39, above.

77. **Intra-Pelvic Drainage in Males.**—Taylor has made dissections to determine whether the peritoneal pouch in the male pelvis can be drained to advantage similar to that of the female. He finds the rectum loosely attached behind, but more closely so in front, by the prostatic peritoneal aponeurosis, connected with the recto-vesical fascia. It, however, allows separation of the rectum from the prostate and bladder. The anterior wall of the rectum can be separated by blunt dissection and reflected toward the sacrum. Recalling the fact that the recto-vesical pouch is the most dependent point of the peritoneal sac, he reports a case where, through an unfortunate error in dressing, the patient was lost, though the operation was a success. A perineal incision was made and the rectum separated by simply pushing the finger in the perineal wound up to the recto-vesical pouch—a blunt dissection with the finger. He thinks this plan, however, in spite of the misfortune in this case, has a decided advantage over any other plan when dependent pelvic and abdominal drainage is required. With the peritoneal cavity opened and assisted by one hand in the pelvis above, this procedure is as easy as opening the Douglas cul-de-sac through the vagina. He thinks drainage can often be effected without opening the abdomen above, and in some cases may tide the patient over a crisis just as is done by intravaginal drainage. If, however, the recto-vesical pouch is not distended, he doubts whether it would be an easy matter to puncture it as it would easily be pushed inward by the finger or the scissors. If protection to the urethra is thought essential, it can be secured by passing a sound into the bladder. A more probable accident, he thinks, would be a puncture of the rectal wall, but this would be very improbable because of the loose attachment and the added safeguard of a finger as a guide in the rectum.

80.—See abstract in *THE JOURNAL* of November 8, p. 1205.

83. **Peritoneal Adhesions.**—The importance of preserving intact the peritoneal endothelium is insisted on by Morris, who criticises long operation, the use of rubber gloves, etc., as being the causation of adhesions from injury to the endothelium. He points out the dangers of adhesions in producing angulation of the bowel, bloating, involvement of the sensory nerves, and therefore the production of pain, etc. The remedy which he notices is covering the denuded surfaces with omentum according to Senn's method in selected cases, but an extension and amplification of this principle seems to be offered in the use of Cargile membrane for covering denuded surfaces of the peritoneum.

84.—See abstract in *THE JOURNAL* of October 18, p. 1001.

91.—See editorial in *THE JOURNAL* of November 22, p. 1327.

93. **Roentgen Ray in Obstetrics.**—Cooke finds that the value of the α -ray for studying the dimensions of the pelvis is practically lost on account of the difficulties of its use, and at best it is probably not so reliable as mensuration and palpation performed by a skilled observer. In the study of the gravid uterus the results are wholly unsatisfactory when compared with those obtained by the ordinary recognized methods of examination. For diagnosing certain forms of ectopic gestation fairly reliable presumptive evidence may possibly be secured, but more positive methods will be needed before it can be accepted. Advanced pseudocyesis could doubtless be detected by the use of the rays, but a little chloroform will accomplish the same results more easily. In suspected twin preg-

nancies, where diagnosis can not be made with certainty, the α -ray may have a distinct diagnostic value and would doubtless be of service.

95. **Phthisis Pulmonalis.**—Crismond claims good results from the following treatment: Injection under aseptic precautions of cod liver oil containing bromin and iodine, beginning with 15 minims, and increasing 5 minims each day until 60 minims are reached, keeping this up as long as the patient is under treatment, that is, from two to three months. He also anoints the patient every night after a cabinet bath, with two ounces of perfumed cod liver oil. The patient's nasal cavities are thoroughly sprayed with an antiseptic fluid every morning and his lungs and respiratory organs are filled with nebulized medicine. This, with the open-air treatment and breathing exercises, gives what he considers good results.

103. **Squint.**—Black describes his apparatus consisting of a wooden base supporting an upright. At right angles to the center and top of this upright is attached an arm which can be turned to the right or left at the center of the upright; on the back of this arm a scale of degrees is marked. The light is a long miniature electric lamp that can be flashed on and off with a push button. On the arm is a small marker to attract the patient's attention. The scale is made by extending the radii through the arc of the circle to the arm which forms the tangent, the radius being 60 cm., or the distance of the patient's eyes from the light.

To measure the deviation, the patient is placed in front of the apparatus with the elbows resting on the table. The distance of the eyes being regulated by a cord to which is attached a ring which is held on the little finger at the orbital margin; the light being flashed on will at once attract their attention, the position of the corneal reflex is noted in the fixing eye and the patient directed to look at the marker, which is moved to or from the upright until the reflex of the deviating eye is relatively in the same position as it was in the fixing eye when looking at the light; by directing the patient to look first at the light and then at the marker, the reflex can be located exactly in the deviating eye and the degree read off on the back of the arm opposite the position of the marker. With small children or babies, the mother or nurse holds them on the lap with the child's head between the hands; a match is lighted and held over the marker, at which the baby will naturally look; this is moved back and forth, the electric light being flashed on and off from time to time until the corneal reflex is in relatively the same position in the deviating eye. The light can be flashed on and off so quickly that the child can not have time to change its gaze from the lighted match to the electric light.

104. **Correction of Myopia.**—Friedmann formerly used to consider full correction dangerous, but he thinks if it does no harm it has great advantages by giving the myope the natural conditions of accommodation and convergence. He gives a letter from Knapp, who considers it the correct treatment in good vision with no dangerous fundus changes.

105. **Correction of Myopia.**—Jackson gives statistics showing the advantages, as he considers them, of full correction. He knows of no statistics so extensive as these which can be said to point to any different conclusion. There are exceptions to the rule of full correction, but they do not detract from its importance.

110.—See abstract in *THE JOURNAL* of October 4, p. 855.

111.—*Ibid.*

113. **Epidermolysis Bullosa Hereditaria.**—Wende reports a case of this condition closely resembling in its type the so-called dystrophic variety, and having some unique features. He thinks in the recognition of this group we should consider the chief symptom involved, that of the bulla formation, not forgetting the fact that epidermolysis bullosa, regardless of any subsequent alteration that may appear in any particular case, should always be so classified. He thinks the general etiologic factors at work in these cases are possibly a hereditary or congenital lack of resistance in the skin in connection with poor trophic innervation. There is probably an increased irritability of afferent nerve endings in the skin, by means of which irritation, which ordinarily would have no effect, causes a local vaso-dilator influence through the vasomotor system.

114. **Exfoliative Dermatitis.**—Bowen reports four cases, each of a different type, the first of recurrent desquamative scarlatiniform erythema, which has been abundantly described. The second one was of the type of dermatitis exfoliativa of Wilson. Not so very distinct from this form or type he notices a third case, that of the common secondary exfoliative erythema

developing from psoriasis, eczema, lichen planus, etc., or caused by drugs. Of these he has never known one to have a fatal termination. The last was a case of pityriasis rubra ending fatally and uncomplicated with any tuberculous symptoms.

123.—See editorial in *THE JOURNAL* of November 22, p. 1327.

124. *Chorditis Cantorum*.—Singers' nodes, according to Miller, are due to overstrain of the chords. He illustrates his theory by anatomic descriptions. He finds quick restoration in every case where the proper mental picture of the vocal effort is given to the patient, with a consequent relaxation of the overexerted parts and strengthening of the normal voice supports. The details of his paper are too elaborate to be given here.

125. *Benign Tumors of the Naso-Pharynx*.—The various types of these growths are described by Quinlan with their treatment. He thinks that every case should be treated individually. The forceps which has been in general vogue in the past is now being distrusted on account of the accidents which have followed its use. Experience has been somewhat similar with the hot snare. We do not read of so many cures by the galvanocautic loop as in former years. He is inclined to think the cold snare the best procedure in the vast majority of selected cases. Certain growths, of course, are beyond its reach, but no rules can be laid down in this respect. The typical fibromata can often be removed, while growths which are intrinsically much less formidable are sometimes unapproachable by this means. A certain minority of nasopharyngeal growths can only be removed by the most radical procedures, such as splitting the intervening hard and soft parts and suturing the flaps after the extirpation of the tumors.

127. *Laryngeal Stenosis*.—Two cases of this condition are reported by Clark. In the first case he dilated the stenosis with a female urethral sound, which he thinks is a very admirable means in such cases. In the second case the repeated contraction of the cicatricial tissue rendered the use of the intubation tube almost imperative for a long time, and he almost despaired of getting along without it. He finally succeeded by passing tubes of different sizes and left the patient in a comparatively comfortable position as regards breathing, though the vocal function was impaired.

131.—See editorial in *THE JOURNAL* of November 22, p. 1327.

135. *Cancer*.—The parasitic theory of cancer is discussed by Robin, who is not willing to go quite as far as the Harvard Commission in their conclusions. He is willing to admit that protozoön-like types are found in cancer, but this does not establish their interrelation. It is readily conceived how parasites may contaminate tumors which are exposed to the external air, and exist as a secondary invasion and perhaps accelerate the growth and cachexia.

136. *Cancer of the Rectum*.—The various methods for operation on cancer of the rectum are described by Gant, who gives in detail the technic. He thinks in certain cases vaginal proctectomy should take precedence over the Kocher and Kraske operation, as in all cases in which the growth is so situated it can be removed from the front.

137. *Roentgen Rays in Cancer*.—From clinical experience up to the present time, Leonard considers the following conclusions justified: 1. We have a more potent remedial agent than any other in the Roentgen rays, but they can not be considered as a cure-all, and should not be employed to supersede operation, but to supplement it. The best interests of the patient will be served by early diagnosis, early radical removal by surgical intervention, and subsequent thorough treatment of the infected area by the Roentgen method. Inoperable cases and superficial growths not liable to produce death or give rise to metastases, and also recurrences, may reasonably be submitted to Roentgen treatment previous to operation. It should only be employed by practitioners qualified by education and experience to judge of the therapeutic effects and estimate the proper dosage. We need wider clinical experience before we can have an effective application of this remedy in deep-seated malignant disease.

138. *Mercuric Cataphoresis in Cancer*.—Massey describes his method, which has been published elsewhere, consisting in injection of mercury in the form of ordinary quicksilver into the growth or held within it in union, with a solid electrode of zinc, and being made the anode of the current is attacked by the electrolytic process and the resulting nascent compound, a soluble oxychlorid of mercury and zinc, is diffused throughout the growth rapidly, the patient being under a local or general anesthetic. The result is that the radiating chemicals unite with the protoplasm of the cells and other elements of the growth, producing a rapidly enlarging area of necrosis, which is most effective in the degenerating tissues. The opposite pole being on a distant part of the body, the lines of diffusion will tend to follow the so-called roots of the cancer to their extremities. He finds a current strength of 500 to 800 milliamperes, more or less, applied for sixty minutes, most effective, and considers that the method has decided advantages over the knife. Its disadvantages are the cost of the paraphernalia and the necessity of a knowledge of medical electrophysics in the operator. It also has disadvantages as compared with the x-ray in requiring anesthesia and of producing a wound at the site of the growth, but this is readily curable, differing in this respect from the x-ray wounds. The knife is still preferable in operative growths of internal organs capable of removal, and highly malignant sarcomas of the extremities in which it is possible to amputate the limb far above the site of the disease, but the employment of cataphoresis is better where it is inadvisable to remove extensive contiguous tracts, which can also be sterilized by this method. The x-ray should be used in external growths too extensive for quick eradication by mercuric cataphoresis, in inoperable growths within the chest or abdomen and in general carcinomatosis where other methods fail. He has employed the method in 60 unselected cases where it was begun generally as a forlorn hope, and has had 18 cures, 7 of them having passed the three-year limit.

144.—See editorial in *THE JOURNAL* of November 22, p. 1327.

149. *Treatment of Pneumonia*.—The principal points made by Thomas are the reduction of blood pressure and fever during the first forty-eight hours if possible. In the second stage where danger begins, he would use external applications so far as possible in preference to morphine, etc., for the pain, expectorants if indicated, conserving the patient's strength with good nutritious diet and the best hygienic surroundings and especially look for and guard against heart failure. The larger part of his article is an argument for heart stimulation by strychnia, nitroglycerin, etc.

154.—See editorial in *THE JOURNAL* of November 22, p. 1327.

159.—See abstract in *THE JOURNAL* of November 29, p. 1411.

172. *Tubercular Joint Disease*.—The recommendation by some authorities of traction in tubercular joint disease is questioned by Tracy, who believes that effective fixation with a wood plastic splint is much better treatment. He reports cases. The method, he says, is as simple as it is effective.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal (London), November 22.

- 1 *Lunacy and the Law. William R. Gowers.
- 2 *Cases of Acute Disease of the Nervous System. James Barr.
- 3 Hereditary Cerebellar Ataxy in Two Brothers. J. Mitchell Clarke.
- 4 Case of Hereditary or Huntington's Chorea. F. W. Jollye.
- 5 A Case of Friedreich's Ataxia. R. S. C. Edleston.
- 6 Case of Complete Paraplegia Successfully Treated by Forcible Extension of the Spine. T. Outtersson Wood and James Cantile.
- 7 Three Cases of Paralysis of Muscles of the Hand and Fore-arm. Walter Broadbent.
- 8 A Rare Form of Muscular Dystrophy. James E. H. Sawyer.
- 9 Case of Motor Aphasia, with Hemianesthesia, but No Hemiplegia. William B. Bennett.
- 10 Treatment of Tuberculosis in Hospitals and Infirmaryes. (Concluded.)

The Lancet (London), November 22.

- 11 *Lunacy and the Law. William R. Gowers.
- 12 *Some Further Points Relating to Varicose Veins of the Lower Limbs. William H. Bennett.

- 13 *The Natural History and Pathology of Pneumonia. J. W. Washbourn.
- 14 *Pure Urea in the Treatment of Chronic Pulmonary Tuberculosis; With a Note on the Action of Urea. S. Vere Pearson.
- 15 A Case of Malignant Disease of the Pylorus Occurring in a Young Man Aged 19 Years. G. Paul Anning.
- 16 *Transplantation by Exchange (a Sequel). C. R. B. Keetley.
- 17 A Case of Stricture of the Urethra. William Sang.

Journal of Tropical Medicine (London), November 15.

- 18 *Notes of a Tour in the North Canara District of India in Search of Mosquitoes. (Continued.) E. H. Aitken.
- 19 *Sleeping Sickness: A Suggestion. Alexander Crombie.

Annales de Dermatologie (Paris), September.

- 20 *Pyodermite serpigineuse lineaire. W. Dubreuilh.
- 21 Contribución a l'étude des dermatoses vermeuses superficiales (myases). F. Balzer and M. Schimpff.
- 22 Review of II International Conference for Prophylaxis of Syphilis and Venereal Diseases, Brussels, September 1-6.

Bulletin de l'Académie de Médecine (Paris), November 4.

- 23 *Le Choléra d'Égypte de 1902. A. Proust. (Commenced in preceding number.)
- 24 Dosage de l'oxyde de carbone et de l'acide carbonique dans l'air vicié. F. Jean.

Centralblatt f. Bakteriologie (Jena), xxxii.

- 25 (No. 2.) Studien zur Biologie des Influenza-Bacillus. A. Ghon and W. v. Preyss.
- 26 *Digestion of Bacteria. R. Turro.—Zur Bakterienverdauung.
- 27 Zur Kenntniss der Trematoden-Fauna des Triester Hafens. A. Looss.
- 28 Die Anoplocephaliden der Vögel (of birds). O. Fuhrmann.
- 29 *Der gegenwärtige Stand der Lehre von den Cytollisen und die cytolitische Theorie der Immunität. E. S. London. (Commenced in No. 1.)
- 30 (No. 3.) *Resistance of Plague Bacilli to Cold. C. Toyama.—Ueber die Widerstandsfähigkeit der Pestbacillen gegen die Winterkälte in Tokyo.
- 31 *The Composition of the Tubercle Bacilli Derived from Various Animals. E. A. de Schweinitz and M. Dorset.
- 32 Ueber eine neue Bacterien-Art im Sputum. L. Jöhle.
- 33 Toxic Paralysis of Anthrax Nature. A. Sclavo.—Ueber die toxischen Lähmungen carbunculöser (milzbrandiger) Natur.
- 34 Die Leucocytose nach Digitalis-Gebrauch bei Pneumonie-Infektion. A. Borini.
- 35 *Cell Inclusions, etc., in Vaccine Foci Inoculated in Cornea. C. Gorini.—Ueber die bei den Hornhautvaccinherden vorkommenden Zelleinschlüsse. (Commenced in No. 1.)
- 36 Untersuchungen über die keimtödtende und entwicklungshemmende Wirkung des Lysoforms. O. Seydewitz.
- 37 *Medicated Steam Sterilization. K. Kokubo.—Die kombinierte Wirkung chem. Desinfections-Mittel und heisser Wasserdämpfe.
- 38 (No. 4.) Ueber die Bedeutung der Calcium-Salze für Bacterien. G. Gabritschewsky.
- 39 The Influence of Alcoholic Intoxication upon Certain Factors Concerned in the Phenomenon of Hemolysis. A. C. Abbott and D. H. Bergey.
- 40 *Leuconostoc hominis und seine Rolle bei den acuten exanthematischen Krankheiten (scarlet fever, measles, spotted fever). Hlava.
- 41 Diplococcus im Sputum als Antagonist der pyogenen Staphylo- und Streptococci. D. Gromakowsky.
- 42 Vital Conditions for Agent of Tuberculosis in Butter. A. Pettersson.—Ueber die Lebensbedingungen des Tub.-Erregers in der Salz-Butter.
- 43 Bothrocephalus latus Brems. chez le chat (in the cat). B. Galli-Vallerio.
- 44 Ueber Immunisierungs-Versuch mit dem Kraus'schen Bacillus der Kaninchen-(rabbit) Influenza. E. Jacobitz.
- 45 Färb- (staining) Methoden für Malaria-Parasiten. G. Glemsa.
- 46 *Ein Beitrag zur Anwendung des Formaldehyd-Gases zur Desinfection. O. Voges.
- 47 (No. 5.) The Most Important Methods of Staining Bacteria in Their Action on the Membrane, the Protoplast and the "Inclusions" of the Bacterial Cell. A. Grimme (Marburg).—Die wichtigsten Methoden der Bacterienfärbung in ihrer Wirkung auf die Membran, den Protoplasten und der Einschlüsse der Bacterienzellen. (Commenced in No. 1. Colored plates.)
- 48 Ueber eine neue Sarcina die im Elter gonococcenähnliche Degenerations-Formen zeigt. J. Nagano.
- 49 Ueber eine neue Infections-Krankheit bei Haustieren (domestic animals). A. Aujeszky.
- 50 Sur la pénétration des femelles d'oxyures vermiculaires à travers les parois de l'intestin. P. Vuillemin.
- 51 Die Antikörper (antibodies) des Blut-Serums mit Blastomyeten-behandelter Tiere. F. Sanfelice.
- 52 *Study of Consecutive Immunizations. L. Verney.—Ueber die gegenseitige Wirkung aufeinanderfolgender Immunisierungen im tierischen Organismus. (Commenced in No. 4.)
- 53 The Antihemolytic Action of Blood Sera, Milk and Cholesterol upon Agaricin, Saponin and Tetanolyisin, Together with Observations upon the Agglutination of Hardened Red Corpuscles. H. Noguchi.
- 54 Improved Technique for Bacteriologic Research. T. Kasperek (Prague).—Sterilisierungsbüchsen; Heizung der Brutschränke mit Auer-Brennern; elektrischer Heisswasser-Trichter; ein neuer Warmwasser-apparat und eine Methode zur bacteriologischer Wasser-Untersuchung.
- 55 Zur Züchtung (cultivation) des Pneumococcus. F. Rymowitsch.
- 56 Zur Cultivierung des Microsporon furfur und des Microsporon minutissimum. H. Vornier.
- 57 Ueber einen bequemen Sections- und Operations-Tisch (table) für Laboratoriums-Versuchs-Tieren (animals). Czaplowski (Cologne).

Deutsche Med. Wochenschrift (Leipsic), November 6 and 13.

- 58 (No. 45.) Transmissibility of Bovine Tuberculosis to Man. Köhler.—Ueber den Stand der Frage von der Uebertragbarkeit der Rindertuberkulose auf den Menschen.
- 59 *Ueber weitere Anwendung der Präcipitine. A. Schütze.
- 60 *Enlarged Thymus and Sudden Death. M. Penkert.—Ueber die Beziehungen der vergrösserten Thymusdrüse zum plötzlichen Tode.
- 61 *Fate of a Cancerin-Treated Carcinoma. V. Pulawski.—Ueber das weitere Schicksal einer Esophagus-Krebskranken, welche mit Cancerin Adamkiewicz behandelt wurde.
- 62 Fall von Uterus-Ruptur intra partum ohne (without) Operation geheilt. F. Mendel.
- 63 Zur Prophylaxe der Geschlechtskrankheiten (venereal diseases). E. Schultze.
- 64 *Zur conservativen Behandlung des Entropiums. E. Oppenheimer.
- 65 Summary of International Tuberculosis Conference, Berlin, October 22-26.
- 66 (No. 46.) *Ueber Immunisirung mit Diphtheriebacillen. A. Lipstein.
- 67 *Cast for Fractures of Upper Arm and Shoulder. E. Heller.—Oberarm- und Schultergelenkverband.
- 68 *Die Erkennung (recognition) der fetalen Syphilis. R. Hecker. (Commenced in No. 45.)
- 69 *Cholelithiasis und Pankreas-Erkrankungen. P. Fuchs.
- 70 Assumed Harmlessness of Boric Acid in Meats. F. Hofmann.—Die angebliche Unschädlichkeit von Borsäure im Fleisch.
- 71 Transactions of Prussian Medical Chambers. Henius.—Verhandlungen der preussischen Aerztekammern. Zweiter Bericht für 1902.

Monatsschrift f. Geb. und Gyn. (Berlin), xvi, 3.

- 72 Ueber den Bau (structure) der Nabelgefässe (umbilical vessels). J. Bondl.
- 73 Ueber Complicationen der Geburt (delivery) mit Ovarial-Tumoren. Ovariectomie abd. inter partum, mit nachfolgender Entbindung (delivery) per vias naturales. M. Semon.
- 74 *Zur Technik der transperitonealen Exstirpation des carc. Uterus mit bes. Berücksichtigung der Ureter-Deckung (covering) und der Drainage der Becken-Höhle. J. A. Amann, Jr.
- 75 *Klin. und anat. Beiträge zur Genital-Tuberkulose des Weibes (woman). C. Ahlefeldt.
- 76 Ibid. Critical Review of Literature. A. Hartz.
- 77 Zur Frage der Verwerthbarkeit der Lungenschwimmprobe (floating test) bei Keimgehalt (germs) der Uterus-Höhle. Krönig.
- 78 *Danger of Infection of Vagina from Bath Water. J. Hertzka.—Ueber das Eindringen von Badewasser in die Scheide von Schwangeren und Gebärenden und die Zweckmässigkeit des Bades bei denselben.
- 79 Med. Indications for Interruption of Pregnancy. Critical Review. R. Hantke.
- 80 Recent American Obstetric and Gynecologic Literature. C. S. Bacon.—Bericht über amerik. geb.-gyn. Lit. mit Angabe ihrer Hauptquellen.
- 81 Midwife Reform. M. Runge.—Ein Wort zur Hebammenreform.
- 82 (No. 4.) *Significance of Chills in the Puerperium. C. J. Lucura.—Ueber die Bedeutung des Schüttelfrostes im Wochenbett mit bes. Berücksichtigung der Pyämie.
- 83 Zur Kenntniss der path. Anatomie der Placenta. A. Solowij.
- 84 *Das Verhältniss (relations) der Atmocausis und Zestocausis zur Curettage und ihre Helfactoren. L. Pincus.
- 85 Beitrag zur Behandlung der puerperalen Sepsis. Reidhaar.
- 86 Value of Cryoscopy. P. Mathes.—Was leistet die Methode der Gefrierpunktsbestimmung?
- 87 Review of Recent Finnish Obstetric-Gynecologic Literature. A. Törngren.

Muenchener Med. Wochenschrift, November 4.

- 88 (No. 44.) Cell Toxins and Defenses in Human Organism. W. Weichardt.—Ueber Zellgifte und Schutzrichtungen im menschlichen Organismus.
- 89 Zur Kenntniss der hemolytischen Saponin-Wirkung. W. Schanzenbach.
- 90 *Pleural Effusions in Heart Disease. J. Esser.—Ueber Pleuraergüsse bei Herzkranken.
- 91 *Ueber parenchymatöse Magenblutungen (hemorrhages from the stomach). E. Moser.
- 92 *Beitrag zur Pathologie und Therapie der syphilitischen Tracheal-Stenosen. A. Strubell.
- 93 *Beitrag zur Diagnose der Lungen-Kavernen. H. Cybulski.
- 94 *Fall von Morphium-Vergiftung im frühesten Kindesalter (morphin poisoning of three weeks' babe).
- 95 Efficacy of Bloodless Dilatation of Phimosis. Graeser.—Zur unblutigen Phimosen-Dehnung.
- 96 Ueber rhino-pharyngologische Unterrichts- (instruction) Methoden. R. Kafemann.

Therapeutische Monatshefte (Berlin), xvi, 10, October.

- 97 Die "Erfolge" (successes) des Diphtherie-Heilserums. Kasso-witz.
 - 98 *Zur Casuistik der pernasalen und peroralen Tubage. Floren.
 - 99 Ueber den Einfluss (influence) der Somatose auf die Magen-Motilität (motor function of stomach). H. Singer.
 - 100 Breathing Gymnastics. Hoffmann.—Ueber Athmungsgymnastik und ihre Verwerthung.
 - 101 Die Anwendung der Nasen-Douche. A. Thost.
 - 102 *Ueber den Werth des Amyloforms (als Ersatz für Iodoform) in der Praxis. A. Gerlach.
 - 103 Zur Behandlung des Aborts (abortion), mit bes. Berücksichtigung der Narcose. A. Keller.
 - 104 *Fleber und Fleber-Behandlung. Bergel. (Commenced in No. 9.)
- Upsala Lakarefor. Forhandlingar, vii, 8.
- 105 *Can a Tumor in the Spinal Cord Spontaneously Retrogress? S. E. Henschen.—Kan en ryggmärgstumör spontant gå tillbaka?
 - 106 A New Paired Acid in Ox Gall. V. Wahlgren.—Om en ny parad syra i nötkreatursgallan.

- 107 Study of the Embryonal Development of the Throat. J. A. Hammar.—*Bidrag till halsens utvecklingshistoria.*
 108 Legislation Affecting Arsenic in the Trades. C. T. Mörner.—*Nagra ord i fragan om hindring af gällande arsenikstadga.*
 109 Thermic Sensations Accompanying Application of Constant Test Temperature. K. G. Holm.—*Om kvarstaende temperaturförmåelser vid konstant retnings temperatur.*
 110 Research on the Secretion of the Human Gall-Bladder. V. Wahlgren.—*Undersökning af sekret ur människans gallblåsa.*

1. Lunacy and the Law.—Gowers' address is a criticism of the English law, which, like that in some parts of this country, in its aim to protect the liberty of its citizens, has made it harder for the insane patients and tends to increase the numbers of hopeless cases by requiring commitment to asylums in every case where special treatment is needed, and it is also specially hard on the physicians in the heavy penalties it requires for every case of treatment of uncertified insane. The general result is that the law has to be broken at great risk or the patients suffer. He thinks also that the Lunacy Commission is overworked and should be increased, especially on its medical side. In both of these respects the Scotch law is very much superior to the English.

2. Acute Nervous Diseases.—Barr first calls attention to a class of cases which used to be called serous apoplexy, a name which has now gone out of date, but which he would like to see retained. These cases closely resemble cerebral hemorrhage, but the paralysis is rarely so absolute and the onset is more gradual like that of thrombosis, being as it is a serous congestion. These cases also occur in different classes, the apoplectic attacks occur in overfed persons, those with Bright's disease and high blood pressure with atheromatous vessels, while the other type occurs in the underfed and overworked individual with low blood pressure. The treatment of the two conditions is exactly opposite. In the cerebral hemorrhage you must reduce the blood pressure, while in the other you must raise the general blood pressure and increase the velocity of the circulation. The best drugs are caffeine and digitalis. The associations and causal conditions should receive attention. A sinapism and fly blister to the nape of the neck may do good. The later treatment consists of mental and bodily rest, good food and a long holiday. A case is reported. He also reports a case of paraplegia with cystitis which had in its symptoms resemblance to Landry's paralysis, but examination of the cerebrospinal fluid showed the presence of staphylococci. It would seem as if the patient's low vitality did not afford sufficient reaction to establish a meningitis, but the toxins had a paralytic effect on the motor centers of the cord. In a severe case of cerebrospinal meningitis in the same ward lumbar puncture showed staphylococci in the cerebrospinal fluid and no other organism. The patient whose case is reported was cured by the prone posture and an ice bag to the spine. His cold extremities were wrapped in cotton-wool, quinin, nitroglycerin and urotropin administered, and the bladder washed out with a chinolol solution for the cystitis. Rest and a liberal diet completed the cure.

11.—See also title 1, above.

12. Varicose Veins.—Varix is classed under three heads by Bennett in this address: 1. Congenital; 2, acquired; 3, intermediate. The first includes the vast majority of cases, though they may not have the affection noticeable from birth. By acquired varix he understands cases that come on through accident or otherwise, in veins that are primarily normal, but he doubts whether this ever occurs after adult life has been fully reached. He suggests that the tendency to varix is increasing in young girls on account of the habit of heavy physical exercise in the periods of rapid growth. By intermediate varix he means cases where the congenital defect is increased by injury or strain such as might give rise to acquired varix. The localized varices of the limbs are generally arranged in three main areas, along the line of the internal and external saphena veins and along the outer side and back of the thigh. These may exist singly or in combination with each other. The symptoms are largely pain, a feeling of tension and weight, and edema. The worst appearing cases often cause very little trouble. It rarely becomes obvious before puberty and in congenital cases the appearance of the varix is always prior to the

occurrence of the symptoms arising from it. In the acquired form, on the other hand, the feeling of discomfort and pain generally precede the physical manifestations and call attention to them. The periods of spontaneous increase usually occur at or soon after puberty, between the ages of 20 and 25, about the ages of 30 and 35 years, and between 45 and 50 years. If it shows no sign of increase at 50 years, it rarely occurs spontaneously afterwards. After 60 years there is a tendency for the normal vessels to diminish in size and trouble rarely arises in connection with these after that age unless from thrombosis, injury or some other similar cause. The treatment is either non-operative or surgical. The first he classes under hygienic, including careful avoidance of constipation, the use of careful feeding, close-fitting, well-ventilated underclothing on the limbs, and avoidance of extremes in temperature in the daily bath. He thinks the tepid bath is better than the very cold one. Manual treatment means massage and this may completely check the varix if applied early enough. The rubbing of the varicose parts with alcohol-night and morning is excellent. The method of application is applying it only over the varicose vessels and with only smooth rubbing. During the first part of the massage the limbs should be dependent or flat, and in the second they should be vertical. The association of electricity should be in the form of the electric bath with massage, which is very advantageous, but it is not easily available. The mechanical support he prefers is a well-applied porous bandage; its overuse and misuse is likely to do harm. The operative treatment requires a period of rest after the operation, of at least three weeks before the patient is allowed to make any attempt to walk and at least six weeks or two months before very active exercise is undertaken. He thinks the only way of mitigating the condition is the removal of a portion of the long saphena high up in the thigh, but never below the point in which the large posterior tributary of the inner and back part of the thigh joins the internal saphena. The improvement is more rapid if three inches of the saphena are removed immediately below the knee, but it is not absolutely necessary.

13. Pneumonia.—Washbourn's second lecture discusses the virulence of the pneumococci and the observations which he has made in conjunction with Eyre. He finds that the virulence varies within great limits. It is easily lost in artificial cultivation, and if the pneumococci will grow at 20 C. they are usually of only slight virulence. The virulence may be greatly increased by cultivation. It is found that animals immune against one strain of pneumococci are not necessarily immune against another. The pneumococci obtained from the mouths of healthy individuals are of less virulence and less easy to increase than those obtained from pathologic lesions. Immunization against streptococci does not protect, and it appears that the protective substance is manufactured in some organ in the body and thrown into the blood later. Wassermann has brought forward evidence that points to the bone marrow as the seat of the formation of protective substance of immunization. Washbourn and Eyre fail to find any definite relationship between the agglutinative power and the protective action of the different sera. The lecture reviews the results of other investigations in detail.

14. Tuberculosis.—Pearson has treated seven consecutive cases with urea according to the method advocated by Harper, and gives the details. He compares these with 100 cases treated otherwise. Of the 7 patients the average gain in weight was 4½ pounds, and the average length of stay in the hospital was three months. Of the 100 patients the average gain was 6¾ pounds in the same period of time. There was, moreover, a decided improvement in the general and physical condition, which was not the case with the 7. Attempts were made to measure the exact urea output, though there were some difficulties in securing this. He concludes that there is no stimulating action from the drug; it appears in no way to improve the pulse, the appetite or general vigor of the patient. He therefore summarizes its therapeutic action as follows:

1. Urea given by the mouth in patients with chronic pulmonary tuberculosis increases the output of the urea; but the total increase in this output does not, as a rule, equal the total quantity administered. 2. Urea acts only to a slight extent as a diuretic; this

action is variable and on the whole untrustworthy. 3. In both the output of urea and the output of urine the effect produced by the administration of urea is more marked at first. After a time the body seems to accustom itself to the intake of urea and tends to return to the normal output. 4. Urea does not act as a cardiac stimulant.

16. Transplantation by Exchange.—In the case here reported by Keetley a hairy mole on the left cheek was transferred to the arm in infancy. In placing the infant's arm against its face it was found that the whole skin of the outside of the upper arm from the shoulder down to the elbow would be required to replace the mole if the latter was cut away and filled in by flap transplantation. The operation chosen, therefore, was to exchange the hairy mole of the face and the smooth white skin of the arm, anchoring, so to speak, the arm to the head with strong sutures, which united the former to the transplanted mole, the two flaps lying with their two surfaces in mutual contact, and helping to keep up each other's warmth and nutrition. The risk of sloughing was diminished and there was no sacrifice of tissue. The case was reported at the time, and now, 15 years later, it is reported again with results. To-day the patient is fairly good-looking, but the hairy mole on the arm has grown considerably, while the face is clear. He adds these points in regard to the technic of such cases of which he has had considerable experience within the last sixteen years:

1. Not only the outline of the flaps but the chief points of suture should be carefully marked before the flaps are cut.
2. The knife used to divide the skin should be sharp.
3. Twelve days are not too long to leave the arm and face in contact.
4. It is neither necessary nor desirable to cover the site of operation with plaster of Paris; on the contrary the plaster bandages should be so applied as to leave it freely accessible and the dressings should be changed occasionally.
5. The stronger sutures should be of silkworm gut.
6. Care should be taken not to leave a fragment of mole behind. Cutting the flaps free is a difficult step in the operation, as they have to be cut where folded, and it is sometimes difficult to get a good view. A sharp knife should be used and a strong light should be thrown into the hollow. At the same time the skin should be carefully swabbed free of blood.
7. It should be made absolutely sure that both flaps are entirely cut through before the arm is allowed to move an inch away from the face.
8. The strappings used should be old-fashioned diachylon and not the irritating plasters often sold on rollers.
9. The iodoform gauze should be well rinsed out in warm sublimate solution 1 to 2000.
10. No drain of any kind should be inserted between the flap and its bed; it is not necessary and may be mischievous.

18. Mosquitoes.—Aitken continues his lecture describing the life, habits and peculiarities of the various mosquitoes in the North Canara district of India. He calls attention to the point that too early killing of the mosquitoes may not give a proper idea of their true specific characters. The mosquito does not attain its proper color for some time after emerging from the pupa.

19. Sleeping Sickness.—The point made by Crombie in regard to sleeping sickness is the suggestion to look into the deep cervical lymph glands of the neck for the *Filaria perstans*, as being the most likely real seat of the condition. Obstruction of the deep cervical glands, causing obstruction of lymph return from the brain, is especially, according to his idea, responsible for the symptoms in this disorder. He thinks the deep cervical lymphatics are rarely examined in postmortem researches, but reasoning by exclusion seems to narrow down the cause of symptoms to these organs.

20. Linear Serpiginous Pyodermitis.—Dubreuilh has observed 6 cases of this affection, in 2 women and 4 men, aged from 16 to 54. The pustulation follows an irregular wavy line. He never saw a line bifurcate, but several lines may radiate from the same point. The hand was affected in 2 cases, the arm once, the back and the axilla twice. The affection lasted from one to three months, not impairing the general health, but accompanied by much pruritus. It has no analogy with "creeping disease" or other affections of the kind that have been described, except its linear progression. Antiseptic treatment proved effective, especially a 1/30 solution of nitrate of silver once a day, supplemented by moist compresses or salves to facilitate removal of the scabs.

23. Cholera in Egypt in 1902.—Proust reviews the various epidemics of cholera in Egypt, and remarks that in 1895 the military surveillance of the canal had been suspended which allowed the entrance of cholera in that year. The present epidemic gained entrance by way of the Red Sea. It is to the interest of Europe and America, he proclaims, to prevent this

invasion of the Occident by way of the Red Sea. The sanitary supervision of this region should be in the hands of an international committee, uninfluenced by local affiliations. An international sanitary office should be established with headquarters in Europe, where all the sanitary data could be centralized and agents appointed to supervise the execution of the measures directed by the international sanitary conferences. This international board of health would have no executive power, but merely moral influence. No state would like to have its imperfections, its negligences held up to international reprobation. Each one would strive by every means to avoid this and the moral influence of such an international board would soon overcome the resistance or inertia of the countries still most refractory.

26. Digestion of Bacteria.—Turro found that juice, squeezed from the thyroid, kidney and the muscles of the pig and cow was able to dissolve in one to three days at a temperature of 35 to 38 C., a minimum of 10 per cent. of its weight of a one-day culture of the anthrax bacillus. The addition of 2 per cent. of sodium fluorid did not interfere with the process, but was useful in preventing the development of other bacteria. The white and yolk of egg possess similar digestive powers which increase with time. Older cultures are more resistant.

29. Present Status of Cytolytic Theory of Immunity.—London defines the three substances with which the organism is provided as 1, the desmons, the weapons for attack; 2, the alexins, the weapons for destruction, and 3, the antilyns (antitoxins), the weapons for defense. The degree of immunity depends on the quantity and quality of these three groups of substances, and artificial immunization is attained by promoting their production. Desmons can be produced by immunizing the animal with the cellular element in question. Alexins can not be produced in this way, and if they are not present in adequate amounts, the attempt to immunize fails. Antilyns can be artificially produced by injection of the corresponding lysins (toxins). The phagocytic theory and the humoral theory are merging now into what may be called the cytolytic conception of the struggle of the organism against disease.

30. Resistance of Plague Bacillus to Cold.—Toyama states that the plague bacilli in his tests did not lose any of their virulence or vitality by exposure to the winter weather at Tokio. The coldest day was four or five degrees below the freezing point. Others kept at ordinary incubator temperature proved to be less virulent by the fifty-sixth day and still less so after eighty-four days.

31. Tubercle Bacilli from Various Sources.—The results of De Schweinitz's research indicate the relationship between tubercle bacilli derived from diverse sources. They also emphasize the differences between attenuated and virulent human tubercle bacilli.

35. Cell Inclusions in Vaccine Foci in Cornea.—Gorini has long been advocating the biologic test of vaccine virus by inoculations on the cornea. This method of control has numerous advantages, simplicity, rapidity, etc., and also the fact that it determines not only the virulence of the virus, but also the absence of pathogenic germs. In his latest work in this line he has noticed "cell inclusions" similar to those observed in malignant neoplasms.

37. Medicated Steam Sterilization.—Kokubo proclaims that the addition of a disinfectant to the fluid materially enhances the sterilizing power of steam. Anthrax bacilli were killed in one minute in a 1 to 3 per cent. concentration of cedarwood oil, creosote, anisol, acetone, formaldehyd, etc.

40. Leuconostoc Hominis in Exanthematous Diseases.—Hlava has found the *Leuconostoc hominis* in the necrosed tonsils and in the blood in 21 scarlet fever patients; also in the tonsils, blood, sputum, nasal secretions and lungs in measles (8 cases), and in the tonsils and blood in spotted typhus. It was not pathogenic for animals. It resembles the streptococcus and has probably many times been classed as such, but it usually occurs in pairs or chains, which are enclosed in a kind of sheath. Some of the links also assumed a swollen or lance shape or formed coin rolls. It thrives best on Zopf's bouillon

and saccharose or beet sugar agar. On the latter in Petri dishes it grows projecting in the form of a raspberry above the surface.

46. Improved Technic for Formaldehyd Disinfection.—Voges writes from Buenos Ayres that he has solved the problem of disinfecting the goods of passengers on quarantined vessels in an hour and with very little traces of the odor left after disinfection. A vacuum is produced in the chamber in which the goods are placed to be disinfected, and the penetrating and disinfecting power of the formalin is immeasurably enhanced thereby. Every particle of moisture is greedily absorbed in a vacuum and the formalin penetrates rapidly everywhere. An hour's exposure is sufficient, and as much less formalin is required than by the usual methods, the odor is soon dissipated, and the bedding, etc., can be used at once. A new ship is to be constructed at Buenos Ayres for quarantine purposes, in which this principle of formalin disinfection in a vacuum will be applied on a large scale.

52. Simultaneous Immunization Against Several Infections.—Verney has been studying the mutual action of consecutive immunization against several infections in turn. He found that it was possible to confer agglutinating power against the typhoid, colon and pyocyaneus bacilli which coexisted simultaneously.

59. Further Applications of the Biologic Blood Test.—Schütze announces that it is possible to differentiate the sperma from different animals as well as human sperma by the specific prepared serums of the biologic blood test. It is not necessary to inject the animals with sperma; any organic fluid containing albumin, especially the blood serum, answers the purpose and produces the characteristic and specific reaction. Tests of various yeasts showed that the albuminoid substances in them must be identical, as even this sensitive test failed to disclose any differences between them.

60. Sudden Death from Enlarged Thymus.—Grawitz was the first to direct attention to the medicolegal importance of the enlarged thymus as a cause of sudden death. This communication from the pathologic institute of which he has charge describes two new cases. One was an infant who lived only two hours after version and birth, and the other was an apparently healthy six-month-old babe. Both died suddenly, and the only plausible cause of death was a very large thymus gland. In the second case the gland was in two lobes respectively 10 and 8.5 cm. long. The cases confirm the assumption that a large thymus may compress the trachea until it is actually flattened. If the head is thrown back or the throat assumes any unusual position, the trachea becomes completely occluded and suffocation ensues, although the compression heretofore may not have caused any appreciable symptoms. This explains certain sudden deaths in the water, as the head is thrown unusually far back in swimming. This may also cause unusual pressure on the veins of the neck, which in turn is liable to cause congestion of the gland and consequent increase of pressure. Siegel has reported the case of a child who had suffered from dyspnea for several weeks, finally relieved by tracheotomy and the introduction of a long tube extending to the bifurcation of the bronchi. The long canula caused ulceration and on the assumption that the enlarged thymus might be the cause of the dyspnea, the gland was drawn up after opening the mediastinum, and it was sutured to the fascia over the sternum. The child was completely freed from all his troubles.

61. A Cancer Not Arrested by Cancroin.—Adamkiewicz published a certain case as cured, but later reports show that the patient died within the year after the malignant disease in the esophagus had been positively diagnosed. The cancer continued its course unaffected by the injections of cancroin, although a total of 40 c.c. were injected in the course of four months, and at first the patient seemed to be relieved.

64. Conservative Treatment of Entropium.—When a patient refuses the knife, Oppenheimer has found it possible to cure the entropium by marking on the lower rim of the spectacles the point where pressure can best be applied to the lesion. The optician then fits a small shell along this edge. A pad, shaped something like a stirrup, is screwed into this shell

and bent to fit the lesion. By this arrangement the pad can be altered at will; the pressure is applied from the front, and it is impossible for the patient to hurt himself with this little contrivance, which is not at all conspicuous and is simple and inexpensive.

66. Immunization with Diphtheria Bacilli.—Lipstein has succeeded in producing a powerful immune serum by inoculating animals with large amounts of living or dead diphtheria bacilli after previously injecting diphtheria antitoxin. The result is an immune serum with great agglutinating power, but this power is most marked on the bacilli of the family from which the serum was derived. He suggests that a certain race of bacilli may possess certain receptors and that the resulting immune serum fits this receptor apparatus better than it fits any other.

67. Bandage for Upper Arm and Shoulder Fractures.—Heller's triangle bandage is readily understood from the cuts accompanying the description. It combines a number of advantages, not the least of which is its extreme lightness.

68. Recognition of Fetal Syphilis.—Hecker finds that in Hamburg and Munich from 30 to 35 of each thousand births in the five-year periods between 1881 and 1899 were prematurely or stillborn infants. He has dissected and examined under the microscope 62 of these cadavers and found that all but 26 per cent. were syphilitic, but that in more than half of the syphilitic fetuses there was no naked-eye evidence of syphilitic manifestations. All but 17 of the cadavers were macerated when examined, and the liver was so altered that no nuclei would take the stain in 96 per cent.; the pancreas in 84 per cent.; the spleen in 56; the thymus in 32, but the kidneys and bones in only 10 per cent. In 24 per cent. of all, the kidney was the only organ not too much macerated for examination. The frequency with which the various organs participated in the syphilitic manifestations was: kidney, in 90 per cent. of 29 cadavers examined; the spleen in 61 per cent.; the thymus in 50 per cent.; the pancreas in 46 per cent.; the liver in 23 per cent. of 31 examined and the lungs in 17 per cent. The liver, therefore, is not so important for the diagnosis of hereditary lues as generally accepted, while it is the first organ to show the effects of maceration. If there are no naked-eye evidences of syphilis in a suspicious case he advises hardening or making frozen sections of scraps of the kidney, spleen, thymus, pancreas, lung and liver. Examine the kidney first, and the finding of cellular infiltration of the smaller vessels will render further investigation superfluous. The lack of all pathologic phenomena in the scraps named above, investigated in turn, from an unmacerated fetus, excludes syphilis. In a number of cases the macroscopically diagnosed osteochondritis proved to be merely an imperfect technic. Cellular infiltration of the walls and environment of the smallest cortical arteries in the kidneys is pathognomonic for syphilis. It is probably an incipient inflammatory process, the first stage of interstitial inflammation. The blood current becomes slower in these finest arteries and the syphilitic virus has the opportunity to make its influence felt here first of all. Other changes in the kidneys are occasionally noted in the connective tissue and epithelium and the development of the organ may be arrested or exaggerated. Karvonen's "mathematical method" of counting the glomeruli is of little practical value as yet.

69. Cholelithiasis and Affections of Pancreas.—Fuchs corroborates Opie's statement in regard to the importance of cholelithiasis as a factor in acute hemorrhagic pancreatitis. He goes still further and incriminates it in the etiology of all affections of the pancreas, especially inflammation with tumefaction, and claims that a clinical diagnosis is possible in all such cases. It is reasonable to suppose that the pancreas is pathologically affected as often as the stomach, liver, gall bladder or intestines, and yet we seldom think of it in formulating a diagnosis, but refer the symptoms to the other organs. Many a so-called catarrhal icterus or nervous gastralgia may in future prove to be some affection of the pancreas. As pancreatitis, with the exception of the acute hemorrhagic form, may be cured by operative measures, the pancreas should be examined from this point of view and the possibility of some

The Public Service.

Army Changes.

Movements of Officers of the Medical Department of the U. S. A., under orders from the Adjutant-General's Office, Washington, D. S., from Nov. 21 to Nov. 27, 1902, inclusive:

Arthur, William H., major and surgeon, U. S. A., having reported in person in this city to the Surgeon-General of the Army, in compliance with orders heretofore issued, will proceed to New York City, and assume the duties of attending surgeon and examining of recruits in that city, to relieve First Lieut. Theodore C. Lyster, asst.-surgeon, U. S. A.

Allen, Ira A., captain and asst.-surgeon, U. S. V., now serving in the Division of the Philippines, is honorably discharged from the service of the United States, to take effect Nov. 25, 1902, his services being no longer required.

Black, Allen J., captain and asst.-surgeon, U. S. V., as Capt. Allen, above.

Bowen, Edward N., captain and asst.-surgeon, U. S. V., as Capt. Allen, above, to take effect Nov. 24, 1902.

Boyd, Robert, captain and asst.-surgeon, U. S. V., is honorably discharged from the service of the United States, to take effect Dec. 18, 1902, his services being no longer required.

Borden, William C., major and surgeon, U. S. A., is detailed to represent the Medical Department of the Army at the third annual meeting of the American Roentgen Ray Society, to be held at Chicago, Dec. 10 to 11, 1902. Major Borden will proceed to Chicago in time to reach that place on or before Dec. 10, 1902, and on the adjournment of the society, will return to his proper station.

Birmingham, Henry P., major and surgeon, U. S. A., is relieved from duty at Fort Leavenworth, Kan., to take effect on the arrival at that post of Lieut.-Col. John Van R. Hoff, deputy surgeon-general, U. S. A., and will then proceed to Washington Barracks, D. C., and report in person to the commanding officer of that post for duty, and by letter to the commanding general, Department of the East, to relieve Capt. John H. Stone, asst.-surgeon, U. S. A.

Chaffee, Jerome S., first lieut. and asst.-surgeon, U. S. A., is relieved from duty at the Army and Navy General Hospital, Hot Springs, Ark., to take effect on the arrival at the hospital of Contract Surgeon James C. Minor, U. S. A., and will then proceed to Plattsburgh Barracks, N. Y., and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the East.

Clausius Max F., contract surgeon, U. S. A., is relieved from duty at Fort Huachuca, Ariz., and will proceed to his home, Barrington, Ill., and on arrival report by letter to the Surgeon-General of the Army for annulment of contract.

Lyster, Theodore C., first lieut. and asst.-surgeon, U. S. A., on being relieved from duty in New York City will proceed to Fort Schuyler, N. Y., and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the East.

Minor, James C., contract surgeon, U. S. A., now at Hot Springs, Ark., will report in person to the commanding officer of the Army and Navy General Hospital at that place, for duty.

Phillips, John L., major and surgeon, U. S. A., having reported his arrival at Governor's Island, New York, in compliance with orders heretofore issued, will report in person to the commanding officer, Fort Columbus, N. Y., for duty at that post and by letter to the commanding general, Department of the East, to relieve Major William H. Corbusier, surgeon, U. S. A.

Major Corbusier, on being thus relieved will proceed to Fort D. A. Russell, Wyoming, and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of Colorado, to relieve Capt. William F. Lewis, asst.-surgeon, U. S. A.

Capt. Lewis, on being thus relieved, will proceed to San Francisco, and report in person to the commanding general, Department of California, for transportation to the Philippine Islands, where, on arrival, he will report in person to the commanding general, Division of the Philippines for assignment to duty.

Repetti, John J., captain and asst.-surgeon, U. S. V., is honorably discharged from the service of the United States, to take effect Dec. 31, 1902, his services being no longer required. He will proceed to his home.

Rutherford, Henry H., first lieut. and asst.-surgeon, U. S. A., having completed the duty for which he was ordered to this city by Special Orders, No. 259, Nov. 17, 1902, Department of California, will return to his proper station.

Rutherford, Henry H., first lieutenant and asst.-surgeon, has been granted an extension of leave for one month.

Strong, Richard P., first lieut. and asst.-surgeon, U. S. A., is relieved from duty in the Division of the Philippines, and will report to this city and report in person to the Surgeon-General of the Army for duty in his office.

Stark, Alexander N., captain, and asst.-surgeon, U. S. A., is detailed to represent the Medical Department of the Army at the annual meeting of the American Public Health Association, to be held in the city of New Orleans, La., Dec. 8 to 12, 1902, and will proceed via Washington, D. C., to New Orleans in time to reach the latter place on or before December 8, 1902, reporting en route to the Surgeon-General of the Army for conference. On the adjournment of the association Capt. Stark will return to his proper station at West Point, New York.

Stone, John H., captain and asst.-surgeon, U. S. A., on being relieved from duty in the Department of the East, will proceed to Fort Leavenworth, Kan., and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the Missouri.

Truby, Albert E., first lieut. and asst.-surgeon, U. S. A., is relieved from further duty at the U. S. General Hospital, Washington Barracks, D. C., and will proceed to West Point, N. Y., and report in person to the superintendent of the U. S. Military Academy for duty, to relieve First Lieut. James R. Church, asst.-surgeon, U. S. A., from temporary duty at that place.

Lieut. Church, on being thus relieved, will return to his proper station at the U. S. General Hospital, Washington Barracks, D. C. The following named officers, now serving in the Division of the Philippines, are honorably discharged by the Secretary of War from

the service of the United States, to take effect Nov. 24, 1902, their services being no longer required:

Maj. John R. Hereford, surgeon, U. S. V.; Maj. Samuel C. de Krafft, surgeon, U. S. V.; Capt. Bruce Ffoulkes, asst.-surgeon, U. S. V.; Capt. Waller H. Dade, asst.-surgeon, U. S. V.; Capt. William H. Tukey, asst.-surgeon, U. S. V.; Capt. George H. Jones, asst.-surgeon, U. S. V.; Capt. Ira Ayer, asst.-surgeon, U. S. V.; Capt. Wilson Murray, asst.-surgeon, U. S. V.; Capt. Julius A. Escobar, asst.-surgeon, U. S. V.; Capt. Milton Vaughn, asst.-surgeon, U. S. V.; Capt. William O. Cutliffe, asst.-surgeon, U. S. V.; Capt. Frank L. R. Tetamore, asst.-surgeon, U. S. V.

Van Poole, Gideon McD., first lieut. and asst.-surgeon, U. S. A., is relieved from further temporary duty at the Army and Navy General Hospital, Hot Springs, Ark., and will proceed to Fort Riley, Kan., and report in person to the commanding officer of that post for duty and by letter to the commanding general, Department of the Missouri.

The following named officers now serving in the Division of the Philippines are honorably discharged by the Secretary of War from the service of the United States, to take effect Nov. 25, 1902, their services being no longer required: Capt. Josiah M. Ward, asst.-surgeon, U. S. V.; Maj. William H. Cook, surgeon, U. S. V.; Capt. Oscar W. Woods, asst.-surgeon, U. S. V.; Capt. Charles H. Stearns, asst.-surgeon, U. S. V.; Capt. Harold L. Coffin, asst.-surgeon, U. S. V.; Capt. Harry H. Eberle, asst.-surgeon, U. S. V.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ended November 29:

A. A. Surgeon B. F. Jenness, appointed asst.-surgeon, Nov. 11, 1902.

Pharmacist J. F. Pearson, detached from the Naval Academy and ordered to the Naval Training Station, Newport, R. I.

Surgeon G. P. Lumsden, detached from the *New York* and ordered to the *Hancock*.

P. A. Surgeon E. M. Ship, detached from the Naval Station, Cavite, P. I., and ordered to the *Wilmington*.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 29, 1902:

SMALLPOX—UNITED STATES.

California: Sacramento, Nov. 8-15, 2 cases; San Francisco, Nov. 9-16, 3 cases.

Colorado: Denver, Nov. 8-15, 3 cases.

Illinois: Chicago, Nov. 15-22, 6 cases.

Indiana: Nov. 15-22, Indianapolis, 3 cases; Kokomo, 1 case.

Kentucky: Lexington, Nov. 15-22, 1 case.

Maine: Biddeford, Nov. 15-22, 9 cases.

Massachusetts: Nov. 15-22, Boston, 36 cases, 4 deaths; Clinton,

1 case; Weymouth, 1 case.

Michigan: Grand Rapids, Nov. 15-22, 6 cases.

New Hampshire: Nashua, Nov. 15-22, 12 cases.

New Jersey: Camden, Nov. 15-22, 2 cases; Jersey City, Nov. 8-16,

1 case.

New York: New York, Nov. 15-22, 1 case.

Ohio: Cincinnati, Nov. 14-21, 6 cases; Cleveland, Nov. 15-22, 12

cases, 4 deaths; Dayton, Nov. 15-22, 1 case; Hamilton, Nov. 15-22,

4 cases; Toledo, Nov. 8-22, 15 cases.

Pennsylvania: Nov. 15-22, Altoona, 2 cases, 1 death; Erie, 23

cases; Johnstown, 5 cases, 1 death; McKeesport, 4 cases, 1 death;

Pittsburg, 46 cases, 7 deaths.

Rhode Island: Providence, Nov. 15-22, 1 case.

South Carolina: Charleston, Nov. 15-22, 2 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Nov. 1-8, 17 cases.

Belgium: Ghent, Oct. 18-Nov. 8, 10 deaths.

Brazil: Bahia, Oct. 19-Nov. 1, 6 cases.

Ecuador: Guayaquil, Nov. 1-8, 2 deaths.

Great Britain: Dundee, Nov. 1-8, 2 cases; London, Oct. 25-Nov.

8, 6 cases.

India: Bombay, Oct. 21-28, 3 deaths; Calcutta, Oct. 18-25, 1

death.

Italy: Naples, Nov. 3-10, 4 cases; Palermo, Nov. 1-8, 2 cases.

Mexico: Mexico, Nov. 2-16, 1 case, 2 deaths.

Russia: Odessa, Oct. 18-26, 1 case; St. Petersburg, Oct. 24-Nov.

1, 16 cases, 3 deaths.

Straits Settlements: Singapore, Sept. 27-Oct. 11, 3 deaths.

YELLOW FEVER.

Colombia: Panama, Oct. 10-17, 5 cases.

Costa Rica: Port Limon, Nov. 1-8, 1 case, 1 death.

Ecuador: Guayaquil, Oct. 26-Nov. 8, 3 deaths.

Mexico: Mexico, Nov. 2-16, 2 cases, 1 death; Vera Cruz, Nov. 8-

15, 16 cases, 2 deaths.

CHOLERA—INSULAR.

Philippine Islands: Manila, Sept. 28-Oct. 5, 32 cases, 24 deaths;

Manila, Oct. 6-12, 23 cases, 13 deaths; Provinces, Sept. 28-Oct. 5,

9,263 cases, 5,276 deaths; Provinces, Oct. 6-12, 5,658 cases, 3,274

deaths.

CHOLERA—FOREIGN.

Egypt: Alexandria, Oct. 26-Nov. 1, 29 cases, 32 deaths.

India: Calcutta, Oct. 18-25, 16 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, Nov. 15, 1 case, 1 death; Nov. 18, 1

case, 1 death.

PLAGUE—FOREIGN.

Australia: Queensland, Brisbane, July 1-31, 1 death.

India: Bombay, Oct. 21-28, 142 deaths; Calcutta, Oct. 18-25, 9

deaths; Karachi, Oct. 19-26, 14 cases, 10 deaths; Madras, Oct. 11-

17, 1 death.

Russia: Odessa, June 1-Oct. 26, 49 cases, 17 deaths.

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Original Articles.

TYPHOID FEVER AND WATER SUPPLY IN CHICAGO.

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CHICAGO.

The severity of the recent epidemic of typhoid fever in Chicago has given rise to some discussion concerning the relation of the city drinking water to the outbreak, and considerable interest has been aroused in the future possibilities, as well as the present conditions, of drainage disposal and water supply.

The matter is of far more than local concern. The character of the Chicago water supply affects not merely the large body of persons continuously dependent on this supply, but also all those living in the territory immediately surrounding the city and commercially connected with it. In fact, all the communities of the middle west whose citizens visit Chicago at frequent or at occasional intervals are vitally interested in the quality of the Chicago water supply. Not only is the health of individual visitors endangered by a polluted water, but cases of typhoid fever contracted in Chicago may be imported into other towns and serve as new foci for the spread of the disease, thus enlarging the circle of vicious influence to wide limits. A few years ago it was shown on investigation of the origin of an excessive number of deaths from typhoid fever in a small city over a hundred miles from Chicago that more than half of the cases were clearly contracted in Chicago, and that half of the others could be traced to infection in another city that used unfiltered surface water.¹

The position of Chicago as a railroad center, moreover, entails special and often unregarded responsibility. The tanks of drinking water on the passenger cars which are daily sent out from the city to all points of the compass are often filled directly from the city supply, and if the supply is contaminated one can easily see how infection may thus be spread broadcast among scores of innocent communities.

The special problems of water supply and sewage disposal that confront Chicago are similar to those that must be faced by many other large interior cities in this country, especially those deriving their water supply from the Great Lakes. For this reason, as well as for others that need not be mentioned, the epidemiology of typhoid fever in Chicago can not be looked on as a question of merely local importance.

It is a fact that typhoid fever has for years prevailed excessively in Chicago (Table 1), and that Chicago has apparently suffered from this disease more severely than

any other large American city (cf. e. g., New York, Philadelphia and Boston, Tables 2, 3 and 4).

TABLE 1.—TYPHOID FEVER IN CHICAGO,* 1851-1900.

Years.	Population.	Deaths from All Causes.	Typhoid Fever.		
			Number of Deaths.	Per Cent. of All Deaths.	Per 10,000 Inhab.
1851.....	34,000	927	10	1.08	2.94
1852.....	38,734	1,809	48	2.65	12.39
1853.....	59,130	1,325	35	2.65	5.92
1854.....	65,872	4,217	86	2.04	13.05
1855.....	80,023	2,181	43	1.97	5.37
1856.....	84,000	2,086	66	3.16	7.86
1857.....	93,000	2,414	82	3.40	8.82
1858.....	84,000	2,225	49	2.20	5.83
1859.....	94,000	2,008	51	2.54	5.42
1860.....	109,260	2,264	46	2.03	4.21
1861.....	120,000	2,279	74	3.25	6.16
1862.....	137,080	2,835	85	3.00	6.20
1863.....	150,000	3,875	149	3.85	9.93
1864.....	161,288	4,448	192	4.31	11.90
1865.....	178,492	3,663	190	5.19	10.64
1866.....	200,418	5,931	203	3.42	10.13
1867.....	225,000	4,648	165	3.55	7.34
1868.....	252,014	5,884	200	3.40	7.39
1869.....	280,000	6,448	183	2.82	6.54
1870.....	298,000	7,323	268	3.66	9.00
1871.....	334,270	6,976	272	3.90	8.14
1872.....	367,396	10,156	524	5.16	14.26
1873.....	380,000	9,537	272	2.85	7.15
1874.....	395,000	8,075	211	2.61	5.34
1875.....	407,060	7,899	207	2.62	5.09
1876.....	420,000	8,573	168	1.96	4.00
1877.....	439,776	8,026	159	1.98	3.61
1878.....	450,000	7,422	146	1.97	3.24
1879.....	475,000	8,614	208	2.41	4.38
1880.....	503,298	10,462	171	1.63	3.40
1881.....	540,000	13,874	568	4.10	10.52
1882.....	560,639	13,234	462	3.49	8.24
1883.....	580,000	11,555	361	3.12	6.22
1884.....	630,000	12,471	354	2.84	5.62
1885.....	665,000	12,474	496	3.98	7.46
1886.....	704,000	13,699	483	3.52	6.86
1887.....	760,000	15,409	381	2.47	5.01
1888.....	830,000	15,772	375	2.38	4.52
1889.....	965,000	16,946	453	2.67	4.70
1890.....	1,099,850	21,869	1,008	4.61	9.16
1891.....	1,148,710	27,754	1,097	7.19	17.38
1892.....	1,234,740	26,219	1,489	5.68	12.06
1893.....	1,323,100	27,095	670	2.47	5.06
1894.....	1,308,750	23,701	491	2.07	3.75
1895.....	1,366,880	24,319	518	2.13	3.79
1896.....	1,427,590	23,262	751	3.23	5.26
1897.....	1,491,100	21,809	437	2.00	2.93
1898.....	1,557,240	22,747	636	2.79	4.08
1899.....	1,626,410	25,503	442	1.73	2.72
1900.....	1,698,575	24,941	337	1.35	1.98

* Based on statistics published in the annual reports and bulletins of the Department of Health of the City of Chicago.

† Large territory annexed in 1899. No population annexed between 1890 and 1900.

‡ The figures for these two years are according to the U. S. census. The population of the intervening years has been estimated by the writer on the Registrar-General's method (Newsholme, Vital Statistics, 1899, pp. 5-6). To the figures thus obtained for 1892 and 1893, 35,000 and 70,000 have been added respectively. Any estimate of the floating population in the city during the year of the World's Fair and the preceding year must, however, be regarded as only approximate.

TABLE 2.—TYPHOID FEVER IN NEW YORK,* 1870-1900.

Years.	Population.	Deaths from All Causes.	Typhoid Fever.		
			Number of Deaths.	Per Cent. of All Deaths.	Per 10,000 Inhab.
1870.....	943,300	27,175	422	1.55	4.47
1871.....	955,921	26,976	251	0.93	2.62
1872.....	968,710	32,647	386	1.18	3.98
1873.....	981,671	29,084	313	1.07	3.19
1874.....	1,030,607	28,727	305	1.06	2.96
1875.....	1,044,396	30,709	376	1.22	3.60
1876.....	1,075,532	29,152	325	1.11	3.02
1877.....	1,107,597	26,203	343	1.31	3.10
1878.....	1,140,617	27,008	321	1.19	2.81
1879.....	1,174,621	28,342	268	0.94	2.28

Years.	Population.	Deaths from All Causes.	Typhoid Fever.		
			Number of Deaths.	Per Cent. of All Deaths.	Per 10,000 Inhab.
1880.....	1,209,268	31,037	372	1.16	3.08
1881.....	1,246,011	38,624	594	1.54	4.77
1882.....	1,283,870	37,924	516	1.36	4.02
1883.....	1,322,880	34,011	625	1.84	4.72
1884.....	1,363,075	35,034	476	1.36	3.49
1885.....	1,404,401	35,682	405	1.13	2.88
1886.....	1,447,166	37,351	433	1.16	2.99
1887.....	1,491,137	38,933	421	1.08	2.82
1888.....	1,536,444	40,175	364	0.90	2.37
1889.....	1,583,120	39,679	397	1.00	2.51
1890.....	1,631,232	40,103	352	0.88	2.16
1891.....	1,680,796	43,634	384	0.88	2.26
1892.....	1,827,396	44,317	399	0.90	2.18
1893.....	1,891,306	44,479	381	0.85	2.01
1894.....	1,957,452	41,175	326	0.79	1.66
1895.....	1,879,195	43,420	322	0.74	1.71
1896.....	1,934,077	41,622	297	0.71	1.53
1897.....	1,990,562	38,887	299	0.74	1.50
1898.....	2,048,830	40,438	376	0.93	1.83
1899.....	2,117,106	39,911	294	0.73	1.39
1900.....	2,053,979	43,227	372	0.86	1.81

* Based on statistics published in the annual reports of the Department of Health of the City of New York.

TABLE 3.—TYPHOID FEVER IN PHILADELPHIA,* 1870-1900.

Years.	Population.	Deaths from All Causes.	Typhoid Fever.		
			Number of Deaths.	Per Cent. of All Deaths.	Per 10,000 Inhab.
1870.....	674,022	15,317	409	2.67	6.06
1871.....	700,000	15,485	313	2.02	4.47
1872.....	725,000	18,987	369	1.94	5.09
1873.....	750,000	15,224	364	2.39	4.85
1874.....	775,000	15,238	461	3.02	5.95
1875.....	800,000	17,805	420	2.36	5.25
1876.....	825,594	18,892	761	4.03	9.22
1877.....	850,856	16,004	542	3.39	6.37
1878.....	876,118	15,743	404	2.57	4.61
1879*.....	901,380	15,473	344	2.22	3.82
1880*.....	846,980	17,711	498	2.81	5.88
1881*.....	868,000	19,515	654	3.30	7.43
1882*.....	886,539	20,059	650	3.24	7.33
1883.....	907,041	20,076	579	2.88	6.38
1884.....	927,905	19,999	662	3.31	7.13
1885.....	949,432	21,392	610	2.85	6.42
1886.....	971,363	20,005	618	3.09	6.36
1887.....	993,801	21,719	621	2.86	6.25
1888.....	1,016,758	20,372	785	3.85	7.72
1889.....	1,040,245	20,536	736	3.59	7.07
1890.....	1,046,964	21,732	666	3.07	6.36
1891.....	1,069,264	23,367	684	2.93	6.40
1892.....	1,092,168	24,305	539	2.22	4.93
1893.....	1,115,562	23,655	456	1.93	4.09
1894.....	1,139,457	22,680	369	1.62	3.24
1895.....	1,163,864	23,797	469	1.96	4.03
1896.....	1,188,793	23,982	402	1.67	3.38
1897.....	1,214,256	22,735	401	1.76	3.30
1898.....	1,240,266	23,790	639	2.69	5.15
1899.....	1,266,832	23,796	948	3.98	7.48
1900.....	1,293,697	25,078	449	1.79	3.47

* Based on statistics published in the annual reports of the Department of Health of the City of Philadelphia, in which also appear the irregularities in the population during the years 1879-82, which we copy.

TABLE 4.—TYPHOID FEVER IN BOSTON,* 1870-1900.

Years.	Population.	Deaths from All Causes.	Typhoid Fever.		
			Number of Deaths.	Per Cent. of All Deaths.	Per 10,000 Inhab.
1870.....	250,526	6,098	168	2.75	6.71
1871.....	258,032	5,888	176	2.99	6.82
1872.....	265,764	8,090	229	2.83	8.62
1873.....	321,200	7,869	243	3.09	7.56
1874.....	331,395	7,812	202	2.58	6.10
1875.....	341,919	9,060	227	2.50	6.64
1876.....	346,004	8,253	145	1.75	4.19
1877.....	350,138	7,316	156	2.13	4.46
1878.....	354,322	7,636	120	1.57	3.39
1879.....	358,554	7,398	119	1.61	3.32
1880.....	362,839	8,531	154	1.80	4.24
1881.....	368,190	9,016	207	2.29	5.62
1882.....	373,620	8,995	212	2.36	5.67
1883.....	379,129	9,740	198	2.03	5.22
1884.....	384,720	9,622	216	2.24	5.61
1885.....	390,393	9,618	152	1.58	3.89
1886.....	401,374	9,268	135	1.46	3.36
1887.....	412,663	10,073	183	1.82	4.43
1888.....	424,274	10,197	170	1.67	4.01
1889.....	436,208	10,259	186	1.81	4.26
1890.....	448,477	10,181	155	1.52	3.43
1891.....	457,772	10,571	154	1.46	3.36
1892.....	467,260	11,236	137	1.22	2.93
1893.....	476,945	11,710	148	1.26	3.10
1894.....	486,830	11,520	141	1.22	2.90
1895.....	501,083	11,329	163	1.44	3.25
1896.....	516,305	11,634	162	1.39	3.14
1897.....	528,912	11,154	173	1.55	3.27
1898.....	541,827	10,886	185	1.70	3.40
1899.....	555,057	11,167	195	1.48	2.97
1900.....	560,892	11,678	143	1.22	2.55

* Based on statistics published in the annual reports of the Health Department of the City of Boston.

The marked and constant excess of typhoid fever in Chicago which is shown in Table 1 has been generally attributed to the pollution of the city water supply.²

Since a very early period in the history of the city the extraordinary practice has prevailed of allowing a portion of the sewage to flow into Lake Michigan, which has been at once the recipient of the city refuse and the source of the city water supply. A large number of the city sewers have for some time emptied into the small stream known as Chicago River, which on this account has achieved a widespread and unenviable notoriety. As long ago as 1865 the uneasiness that was naturally felt regarding the effect of such conditions on the public health led to the use of a pumping station at Bridgeport, situated at the junction of the Illinois and Michigan Canal with the south branch of the Chicago River. This station was originally established simply for supplying water to the canal, but in the year mentioned the Board of Public Works made arrangements for utilizing the pumping works to cleanse the river, and up to the year 1900 the river water, which in late years has been practically crude sewage, was more or less regularly pumped into the canal. The capacity of the pumping works was enlarged from time to time to keep pace with the growth of the city and the attendant increase of pollution, and as an additional precaution the water tunnels were pushed further and further out into the lake in the hope of escaping the sewage outflow. Both these means failed, however, to give more than a temporary relief. The working of the pumps at Bridgeport had the effect under ordinary conditions of reversing the flow of the Chicago River and of causing a sluggish current to set away from the lake. Occasionally, however, the pumps were unable to cope with variations in the lake levels, and the floods caused by sudden and heavy rains flushed far out into the lake the unspeakable filth of the Chicago River. The results of this critical situation might have been, and indeed were foreseen. On more than one occasion Chicago has suffered severely from typhoid fever, a disease known to be caused by polluted water. One of the most serious epidemics occurred in 1891, when there were 1,997 deaths from typhoid fever in twelve months, a number larger than that occurring during the same period in the state of New York with a population five times as great. The death rate from typhoid fever in Chicago in 1891 was seven times as great as that in the city of New York and eleven times that in the city of London. From the year 1892 up to the present year no epidemic of such alarming proportions has visited the city, but the death rate from typhoid fever and kindred diseases has remained persistently high, and on several occasions, especially in the seasons of heavy rains or melting snow, miniature epidemics have unduly swollen the death rate for a few months. The recent epidemic has proved the most extensive that has occurred since 1892, and is one of the worst that the city has ever experienced.

TABLE 5.—DEATHS FROM TYPHOID FEVER IN CHICAGO BY MONTHS.

Month.	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902
January.....	53	67	311	41	46	30	87	38	29	44	23	26	21
February.....	136	61	187	30	26	21	89	46	32	24	14	16	14
March.....	103	71	76	41	27	26	65	41	71	18	27	15	20
April.....	45	136	56	58	30	30	33	19	94	23	23	20	16
May.....	82	408	70	56	31	30	31	13	67	25	19	24	21
June.....	107	167	55	60	31	18	44	23	35	28	17	9	22
July.....	86	200	211	55	37	36	58	27	55	41	26	55	44
August.....	115	182	179	76	52	59	64	42	45	62	34	83	103
September.....	95	193	138	86	71	76	87	48	65	58	34	74	165
October.....	72	171	92	81	68	90	89	61	62	44	38	102	78
November.....	67	150	67	43	38	60	60	44	56	43	39	54	..
December.....	47	160	47	43	34	42	44	35	55	32	43	31	..
Total.....	1008	1997	1489	670	491	518	751	437	636	442	337	500	..

It will be noticed (Table 5) that in August and September of the present year 358 deaths were recorded,

a number somewhat larger than the total reported for the whole twelve months of 1900 (337). The deaths in August, 1902 (193), exceeded the number reported for any month since July, 1892 (211).

The epidemic of 1902 has caused much surprise and some consternation among the citizens of Chicago for the reason that the opening of the Drainage Canal was very generally regarded as marking the close of the excessive water pollution that had previously existed. As is well known, the canal is designed to conduct into the Illinois River the sewage of Chicago, diluted to such a degree with the pure water of Lake Michigan as to occasion no danger or inconvenience to the inhabitants of the Illinois valley. To this end the Chicago River, into which most of the sewers still empty, is made the main feeder of the canal, and a steady current away from the lake is produced in the river by gravity flow. The velocity of the flow is regulated by controlling works at Lockport, some thirty-three miles from the mouth of the river. The canal was opened early in 1900, and the belief that typhoid fever would never again prevail so extensively as in the past received almost immediate support in the low death rate from typhoid fever that was recorded in that year. In 1900 the typhoid fever death rate was the lowest that had ever been reported (1.98) in the sanitary history of the city (Table 1), and the total number of deaths from typhoid fever was smaller (337) than in any year since 1880, when the population of the city was less than one-third as great as in 1900. This low death rate, which followed the opening of the canal and was accompanied by a visible improvement in the Chicago River, naturally encouraged the feeling that great epidemics of typhoid fever in Chicago were not likely to recur, and that a marked and permanent improvement in the water supply had been effected.

As a matter of fact these sanguine expectations were not wholly justified by the conditions of drainage and water supply that obtained in 1900, and, indeed, still persist up to the present time. Through a lack of foresight and co-ordinated endeavor on the part of the responsible authorities, a large part of the sewage system of Chicago remains at this date unconnected with the Drainage Canal. An "intercepting sewer" is in process of construction along the lake shore in the southern section of the city, and another (the Lawrence Avenue sewer) north of the Lincoln Park district. It is said that the latter will be finished within a short time, but that the sewer running from the neighborhood of 39th Street to 87th Street will require several years for completion. Meanwhile a population of more than two hundred thousand, closely fringing the lake front, will continue to drain into the lake and pollute the water supply with crude sewage.

The accompanying diagram (Fig. 1)* illustrates with sufficient vividness the present relations of drainage and water supply. The shaded portion represents the territory now draining into the sanitary canal. It is evident that under the existing circumstances the occurrence of a sudden and heavy rainfall may be sufficient to lead to the mingling of a large amount of fresh sewage with the lake water. Until such time as the intercepting sewers and the connecting 39th Street sewer are completed and the pumps at 39th Street are in working order little relief from this situation can be anticipated.

Doubt has been expressed in some quarters as to whether the recent outbreak of typhoid fever was in

reality due to the water supply, and the opinion has been advanced that other factors should be sought for. The especially severe incidence of the disease on some of the congested districts of the city has been thought by some to point to a more localized cause for the epidemic. Apart from the facts already set forth regarding the abundant opportunities that exist for the entrance of fresh sewage into the drinking water, there are certain other considerations which indicate unmistakably that the outbreak was primarily, at least, of water-borne origin. In the first place the dimensions of the epidemic and the fact that all sections of the city have suffered seriously, if not perhaps equally, must, on epidemiologic

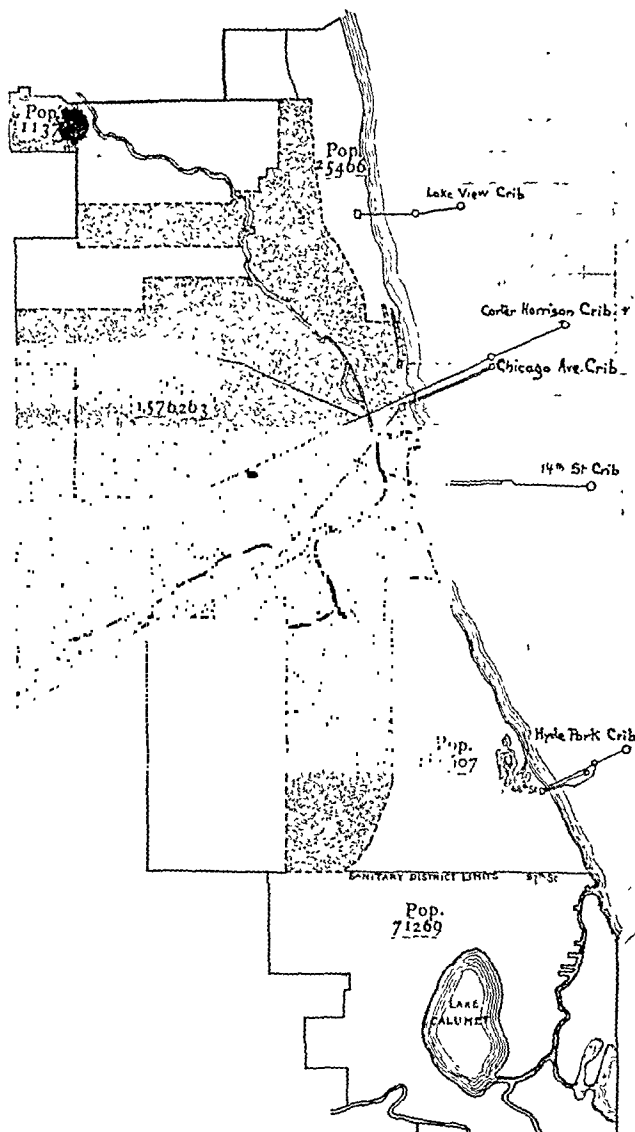


Fig. 1.—Map of the City of Chicago, showing the districts draining into the Sanitary Canal. Oct. 1, 1902.

grounds, be looked on as convincing evidence of water infection. Epidemics of typhoid fever due to infected milk, to oysters or to other raw foods are more limited in character, and rarely if ever involve large masses of population. There seems to be no instance on record where a large city possessing a pure or purified water supply has experienced an epidemic of typhoid fever of the proportions of the one that has just visited Chicago. The low and relatively uniform death rate from typhoid fever in Berlin, London and Vienna, all cities which possess good water supplies, may be contrasted with the violent fluctuations in the death rate from this disease in Chicago and Philadelphia (Fig. 2).

* I am indebted to Prof. J. H. Long for the material from which this figure was constructed.

The majority of typhoid fever epidemics both large and small are due to water infection. Schüder³ has recently collected information concerning the etiology of 650 separate outbreaks of typhoid. Over 70 per cent. (462) of these were outbreaks caused by water, and if the number of the persons affected in the various outbreaks had been enumerated the proportion of individual cases due to water infection would doubtless have been found even higher.

It is probably true that typhoid fever is sometimes spread by means of infected dust. The experiments of Firth and Horrocks⁴ indicate that from ordinary soil, allowed after inoculation with the specific bacillus to become so dry as to be readily blown about as dust, the bacillus can be recovered as late as the twenty-fifth day after inoculation, and the authors conclude that typhoid *infective material can be readily translated from dried soil and sand by means of wind and air currents.* In

ever been clearly traced. The experiments of Neisser⁵ indicate that a velocity of 1.7 cm. per second is necessary to raise the typhoid bacillus in dust to a height of 80 cm., and according to Flügge⁶ the currents of air in closed apartments do not attain a velocity greater than $\frac{1}{4}$ mm. Dust infection in houses, then, must be extremely rare, and this explanation is hardly to be resorted to in the case of an extensive city epidemic. It is probable that some of the outbreaks that have been at times attributed to dust carriage may be more reasonably traced to the agency of flies,⁷ which, as is well-known, are capable, after visiting infectious material, of readily infecting various foods on which they may alight. It is stated on good authority that unclosed privy vaults and cesspools are still allowed to exist in some of the most densely populated districts of Chicago, and if this is the case it is certainly possible that in the recent epidemic flies may have had much to do with the incidence of the disease on the poorer quarters of the city.

Among other causes which have been suggested to account for the epidemic is an unusual infection of vegetables, of milk, and of other foodstuffs. It can not be doubted that some of the cases of typhoid fever occurring from time to time in every large city are due to this cause, but here again it is difficult to understand how even extraordinary accidents affecting milk and food could lead to the sudden and almost simultaneous infection of several thousand persons in different sections of the city. As a matter of fact, there is every reason to anticipate that minor epidemics of typhoid fever due to infected milk, to infected raw vegetables, to the agency of flies and other insects, and to what has been called secondary infection will follow in the wake of a great outbreak. A striking instance of the way in which typhoid fever may be perpetuated and disseminated in a community with naive or unsanitary habits of life has been described by Sedgwick.⁸ In the words of this writer: "It is easy . . . to understand how dirt, diarrhea and dinner too often get sadly confused." Whenever a large number of cases of typhoid fever exist in a community the superabundance of infectious material naturally increases the opportunities for diffusion. The chances that milk supply or food supply may become a source of infection are plainly greater at the time of an epidemic than when the disease is comparatively rare. It is unquestionably correct to recognize the danger of spread by secondary infection, by the agency of flies and by infected raw foodstuffs, but these factors, important though they are, play a subordinate rôle as compared to water infection.

If Hamilton's law of parsimony can be properly applied to epidemiologic matters, there is no question as to what is the most reasonable explanation of the recent outbreak of typhoid fever in Chicago. While some of the factors just enumerated perhaps contributed to the high death rate during August and September, there is no reason for considering any or all of them as the primary cause. The known and universally admitted facts regarding the water supply are of such a character that the excessive pollution of this supply through the unusually heavy rains of June and July furnishes a sufficient reason for the outbreak.⁹ Since there is at hand an explanation so simple, so in accord with the general experience regarding extensive epidemics of typhoid,¹⁰ and so consonant with the past experience of Chicago itself, it would seem logically unnecessary to seek for another cause.

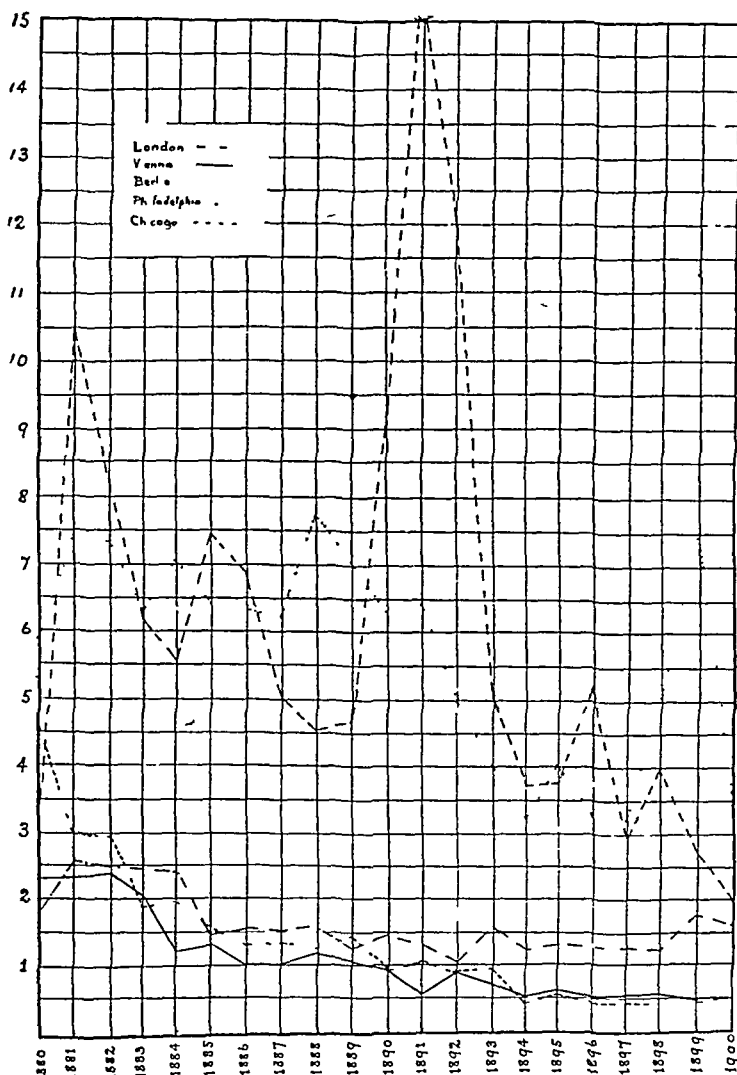


Figure 2.

connection with the present outbreak in Chicago, the definite hypothesis has been advanced that the flooding of cellars and basements from *overcharged sewers*—an incident said to have happened in many parts of the city—has led to the introduction of typhoid bacilli into dwelling houses. It is conceived that with the receding of the waters the stranded typhoid germs might pass into the air and be inhaled by the inhabitants of houses thus affected. This view does not seem to be supported by any epidemiologic evidence, since it has not been shown that any more cases of typhoid fever have occurred in houses with flooded basements than in more favorably situated dwellings. While dust infection is indeed a possibility, few outbreaks from this source have

As has already been stated, the completion of the intercepting sewers, which will conduct into the Drainage Canal the sewage of a population aggregating 180,000 in the vicinity of the Hyde Park water intake, and that of a population of 25,000 in the neighborhood of the Lake View water intake, will lead to material improvement in the character of the supply (see Fig. 1). It may be taken as axiomatic that when a large amount of sewage is kept out of a public water supply typhoid fever will be less prevalent in the community served by that supply. It can not be forgotten that the lowest death rate ever recorded from typhoid fever in Chicago was in 1900, immediately after the opening of the Drainage Canal (Table 1), and that during the first six months in each of the three years 1900, 1901 and 1902 the deaths from typhoid fever were less numerous than for any similar period during the preceding decade (Table 5). No one will question, therefore, that the opening of the Drainage Canal has already effected a definite improvement in the quality of the water supply, and through that in the typhoid fever death rate. It may be confidently expected that when the population of 200,000 which now drains into the lake (Fig. 1), and which is so close to the lake front that its drainage must reach the lake in a fresh condition and therefore be peculiarly dangerous, becomes properly connected with the canal the deaths from typhoid fever will diminish still further. It is certainly singular that the present situation should not have been foreseen and guarded against. The excuse for allowing a large portion of the population, constituting from its topographical position the greatest menace to the city water supply, to pour fresh sewage into the lake for upward of three years after the completion of a great and enormously expensive sanitary undertaking can hardly be adequate.

While it is generally known that the acutely dangerous situation represented by the map (Fig. 1) is only temporary, it is not so widely understood that even the completion of the intercepting sewers will not mark the final solution of the water problem for Chicago. No one familiar with the general sanitary history of water supplies can expect that all chances for water pollution will cease with the completion of the sewerage system. The lake water near the intakes will still be exposed to possibilities of infection from passing vessels, from excursion steamers, from bathers and other sources. It might perhaps be supposed that these sources of contamination could be safely neglected, but when it is remembered that typhoid bacilli may persist in the urine far into convalescence and that as many as 172,000,000 individual germs have been found in one cubic centimeter of the urine,¹¹ it is evident that a single discharge of urine from a typhoid fever convalescent might render many gallons of water capable of conveying disease. The famous Plymouth epidemic,¹² in which 1,104 persons contracted typhoid fever and 114 died, was caused by the discharges from a single case of the disease, and the infectious material, moreover, had to pass through three storage reservoirs with a combined capacity of 5,000,000 gallons. Practically all unfiltered surface waters are at the mercy of accidents of this character, and the possibility of occasional infection can not be ignored.

In fact, the experience of the city of Zurich¹³ shows that the incidental pollution of a body of water of considerable size is not to be considered with indifference. The water supply of Zurich is drawn from the lake of the same name, and although no public sewers empty

into the lake, there is opportunity for pollution in the ways noted above, and it is said that the incidental contamination of this sort has apparently increased with the growth of the city. This pollution from sources other than sewers reached such an extent that sand filtration was resorted to in 1886 as a means of checking the increase in typhoid fever. For the six years before the introduction of filtration the annual typhoid fever death rate was 6.9 per 10,000 inhabitants, and for the six years after it was only 1.0; the improvement is attributed by the local authorities to the purification of the water supply. A similar increase in the pollution from non-sewerage sources has been observed in Mystic Lake at Boston, although in this case the body of water affected is much smaller than at Zurich. In Germany the use of unfiltered surface water for municipal supplies is altogether prohibited.

The probable increase in the incidental pollution of Lake Michigan, important as this may ultimately prove to be for the problem of a pure water supply for Chicago, does not, however, press for consideration so much as another question. This concerns the limitation in the boundaries of the area for which drainage is or is about to be provided. The present sanitary district of Chicago does not include either the independent towns and villages along the north shore or the rapidly growing part of the city itself lying south of 87th Street (see map). The Calumet sewer district has a resident population of 71,269, and is said to be growing rapidly. W. L. Marshall, United States Government Engineer, in his report¹⁴ of 1892, estimates the pollution of the Calumet River to be equivalent to that caused by a population of 700,000, owing to the number of persons and manufacturing establishments along the course of the river. While manufacturing refuse is not perhaps so objectionable on sanitary grounds as house sewage, this high degree of pollution is worthy of concern. As will be seen by reference to the map, the drainage from the Calumet region constitutes a particular menace to the water intake supplying the southern section of the city. No provision has yet been made for dealing satisfactorily with the sewage of this territory, although it is manifest that, at least so far as the Hyde Park water supply is concerned, the untrammelled discharge of the Calumet sewage into Lake Michigan threatens the health of the city (Fig. 1). A project for draining this area into the sanitary canal has been urged at various times, but as a large extent of rather thinly populated territory is involved, the expense to the resident taxpayers has proved a serious barrier, and in fact a measure proposed for this end was overwhelmingly defeated at the polls. Whatever course is finally adopted in regard to the Calumet sewerage it will probably have to be undertaken at the expense of the city of Chicago. In the absence of any policy the citizens of Chicago risk a repetition of conditions like those that have led to the recent distasteful outbreak of typhoid fever.

The question of the most suitable means of protecting the water supply against this source of pollution is therefore an urgent one at this time. The plan that has been most seriously considered is the construction of a canal from the lake at Calumet to join the sanitary canal at the "Sag." This would involve, it is stated, very nearly twenty-four miles of constructive work and is estimated by the chief engineer of the Drainage Board to cost \$11,879,854. The history of engineering undertakings of this class would seem to indicate that this limit might possibly be exceeded.

There is at least one other possible method of dealing

with the Calumet situation which does not appear to have been as yet fully discussed. This is the possibility of purifying the Hyde Park water supply by the method of slow sand filtration which is so successfully employed in Berlin, London, Hamburg and many other European cities. The total amount of water pumped by the 68th Street station in 1900 was 22,573,449,573 gallons, and the daily average 61,845,067 gallons.¹⁵ The cost of constructing a filtration plant for this amount of water under the conditions prevailing locally is, of course, a matter for detailed expert investigation, but the experience of other American cities may possess some interest, even if not directly applicable. The city of Albany, N. Y., installed in 1899 a filtration plant that is capable of yielding 14,700,000 gallons daily, at a cost of \$196,633. Assuming that substantially the same ratio would hold for the treatment of the Hyde Park water, and there are some reasons for believing that the advantage would be on the side of the latter, the cost of construction of suitable filtration works would fall between \$2,000,000 and \$2,100,000. Land for the purpose could perhaps be obtained near the present pumping station at the southern end of Jackson Park, and since, as has been found in several European cities, the presence of filter basins is by no means incompatible with the aims of landscape gardening, it is possible that a tract of land might be granted by the South Park Commissioners. Even if land had to be purchased outright or made by filling in along the lake front, the cost in this neighborhood should not be exorbitant. There seems every reason to suppose that the dune-sand found so abundantly along the shore of Lake Michigan would prove suitable for the construction of the sand beds, and that the expense of transporting the material would therefore not be excessive.

The expense of operating a sand filter increases with the amount and turbidity of the water treated. The cost of operation for twenty years at Poughkeepsie, N. Y., with the moderately turbid Hudson River water has averaged \$3 per million gallons of filtered water.¹⁶ In England and Germany the cost of operation is much lower than this, but the economic conditions obtaining in the United States render it probable that the Poughkeepsie figures would represent a fair average, although, of course, local conditions differ widely. Supposing that in Chicago the cost of operation ranged even as high as \$4 per million gallons, the annual cost of operation would amount to \$90,292, or a capitalization of about \$2,250,000 on a 4 per cent. basis. Although the estimates here given are necessarily of a most tentative character, they have been made on a basis sufficiently liberal to indicate that a sum considerably below the estimated cost of constructing a canal from Calumet to the sanitary canal would suffice for the construction and annual maintenance of a modern sand-filtration plant in connection with the 68th Street pumping station. The installation of a sand filter would possess the additional advantage that the incidental and accidental pollution of the lake would then be securely guarded against. On the other hand, it would prove most discouraging to discover after the expenditure of seven or eight million dollars for the construction of a drainage canal for the Calumet region that the pollution of the Hyde Park water supply from towns in Indiana south of the Calumet and from other sources was still so great that the amount of typhoid fever in that portion of the community served by this supply remained excessive.

It might be added, furthermore, that the amount of

water pumped by the 68th Street pumping station in 1900 was nearly one-fifth of the total pumped for the whole city, and that the average daily consumption of water for the whole city reached the enormous figure of 169 gallons per capita (average amount of water pumped per day in gallons, 322,599,630; population of Chicago, U. S. Census, 1,698,575). These figures betray the enormous waste of water that takes place under existing conditions. Experts insist that 70 gallons of water daily per capita amply suffices for all the legitimate needs of a modern American city.¹⁷ If it is true, as maintained by competent engineers, that more than one-half of the water pumped into the Chicago mains is wasted by leakage or carelessness, any method of reducing this waste would also reduce proportionately the cost of construction and maintenance of a sand filter, since both initial and operating expenses depend directly on the quantity of water treated.

It may be remarked finally that, assuming a reduction of one-third in the amount of water consumed (i. e., to 125 gallons daily per capita, which is still 50 per cent. larger than a liberal normal consumption), and assuming that the expense of construction of sand filters in other portions of the city would not differ greatly from the figures already given, the cost of installing a filtration plant for the water supply of the whole city would be about \$8,500,000, and the cost of operation should be capitalized at about the same sum.* This is certainly not the psychologic moment for inviting the citizens of Chicago to consider any general sanitary project, but so far as the Hyde Park water supply is concerned the construction of a sand filter in lieu of another drainage canal would seem worthy of consideration on grounds both of efficiency and economy.

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7. Vaughan: Oration on State Medicine, Fifty-first Annual Meeting of the A. M. A., THE JOURNAL, June 9, 1900, p. 1431.
8. Report of State Board of Health of Massachusetts, 1892, p. 732.
9. The precipitation for May, June and July, 1902, according to the records of the U. S. Weather Bureau in Chicago, was greater (17.31 in.) than for any similar period since 1892 (19.58), the year of the last great epidemic of typhoid fever.
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11. Schüder: Loc. cit.
12. Petruschky: Centralbl. f. Bakt., 1898, xxiii, p. 577.
13. 12th Annual Report, Pennsylvania State Board of Health, 1886, p. 176.
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15. Report of Department of Public Works, City of Chicago, 1900, Commissioner's Report, p. 10.
16. Report of Department of Public Works, 1900, Engineer's Report, p. 46.
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*The construction of the Main Drainage Canal alone cost something more than \$36,000,000. Other changes and appurtenances are contemplated which will add materially to this sum. One recent estimate of the expense of further improvements is as follows:

For widening the Chicago river to a width of 130 feet between Lake and Eighteenth Streets, and to a width of 400 feet south of that point.....	\$11,000,000
For the widening of the earth section of the drainage channel between Chicago and Summit to the standard width of rock sections.....	500,000
For the construction of twenty-seven bascule bridges to replace center pier structures.....	4,050,000
For a system of drainage for Evanston and adjacent north shore towns.....	4,500,000
For a system of drainage for the Calumet region, including the construction of the Sag cut-off.....	11,879,854
Total.....	\$31,929,854
Add original cost of construction.....	36,000,000
	\$67,929,854

THE SURGICAL TREATMENT OF GALLSTONES.

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The treatment of gallstones can be divided into medical and surgical. For many years the medical treatment prevailed and the greater benefits to be obtained by surgical treatment were not duly appreciated. Owing to the great advances made in surgery the tables have been turned and the sufferers from gallstones obtain a much greater measure of relief. I know but little of the so-called medical treatment of gallstones, and I am very skeptical as to its practical value.

DANGERS INCURRED BY PATIENTS SUFFERING FROM GALLSTONES.

Not only is there a danger of sudden death from the passage of a gallstone, but there are many other dangers to be encountered. There is the great danger of gangrene of the gall bladder (closely resembling gangrene of the vermiform appendix), with rupture and death or with the formation of a secondary abscess; there is the danger of inflammation with empyema of the gall bladder, accompanied by chills, high fever and the occurrence of a suppurative pyelophlebitis followed by death. There is the danger that septic infection may travel from some ulcer produced by gallstone irritation of the mucous membrane of the gall bladder or ducts to the vessels of the liver. Even when no pus is to be found either in the gall bladder or gall ducts these septic conditions may spread beyond the confines of the gall bladder and produce inflammation of the peritoneum and surrounding structures. Abscesses may form external to the gall bladder and may perforate in various directions, upwards to the right pleural cavity, forwards through the skin or backwards into the posterior hepatic pouch. These are grave conditions, and if they do not terminate fatally the patient is liable to be ill for many weeks.

I have seen one patient die from shock produced by the passage of a gallstone through the common bile duct, and, a few years ago, I saw a gallstone that was presented to one of our medical societies after it had been removed postmortem from the common bile duct of a patient who died suddenly from shock during its attempted passage. Many other cases of death from this cause have been reported. Obstruction of the common bile duct by stone frequently occurs in patients advanced in years, so that this serious complication must be considered as a constant menace to those who are suffering from cholelithiasis.

A few weeks ago I removed a gallstone from the common bile duct of a woman aged 65, who was suffering for the first time from continued jaundice and who did not know that she was troubled with gallstones, though 147 were removed from the gall bladder. A more frequent resort to surgical treatment would prevent the occurrence of this serious condition in elderly people and would also prevent that slow and living death that is to be looked forward to by many of these sufferers. They begin to have fever and chills and intermittent attacks of jaundice with impairment of the appetite and a loss of strength. The excessive use of opiates and alcoholic stimulants makes them still more miserable until death finally ends the scene.

A patient suffering from gallstones may, at any moment, become seriously ill and the surgeon will find himself face to face with as great a responsibility as if he was dealing with a case of acute appendicitis. At any time these patients may have a violent outbreak of a

rapidly fatal cholecystitis with cholangitis. Repeated inflammations may produce such a condition of chronic inflammatory exudate as to prevent the surgeon from carrying out surgical measures for their relief. When brought face to face with these serious complications our responsibilities are increased.

GENERAL CONSIDERATIONS.

In discussing the surgery of the region occupied by gallstones we must consider the organs with which we have to deal. Stones may find a lodgment in the ducts throughout any part of their course, or in the gall bladder, or in both. When removing these stones we are called on to open hollow organs that are liable to leak, to peel away tissues from a solid organ that is liable to bleed, and to readily absorb septic material, and we are called on to open ducts that are lying in close proximity to blood vessels that may be injured. The leakage of bile from open ducts and from an opened gall bladder was to be feared before attention was drawn by Morison to the post-hepatic pouch and to the safety of gauze drainage by my friend, Dr. W. E. B. Davis, Birmingham, Ala., after he had demonstrated its usefulness in many experiments on dogs.

Morison's pouch should be used for drainage in all cases in which post-operative leakage is liable to occur. The method I have adopted is to institute through-and-through drainage by means of a piece of rubber tubing entering through the wound in front and emerging through a counter opening at the deepest part of this pouch. Not only should a rubber drainage tube be used, but iodoform gauze packing should be placed over the leaking point or points to still further assist the tube. With a due attention to this matter many of the operations for the removal of gallstones are robbed of their terrors and patients who formerly would have died can now be carried safely through.

Owing to the introduction of this method of drainage it is no longer necessary to break up calculi by the needling process, or to open the intestine for the purpose of removing a stone from the common duct, and why? Because we no longer are afraid to make a direct incision over the stone into even the most friable duct. Then, if necessary, we can readily break up the stone by means of gallstone forceps passed through the opening.

CHOLECYSTOSTOMY.

Gallstones are found most frequently in the gall bladder. They are sometimes formed with great rapidity. Among my collection I have several thousand taken from the gall bladder of one patient.

CASE 1.—In February, 1897, he had his first attack. Cholecystostomy was performed, a fistulous opening remained, and this was closed by two sutures. In November, 1897, he again had colic and jaundice; in March, 1898, Dr. Tiffany of Baltimore operated on him. He found no stones. In June, 1898, he was still in the hospital suffering from attacks of colic and transient jaundice. The gall bladder was again opened, but no stones were found. July 3 he suffered from a blow on the head for which a portion of the skull was elevated. In August, 1899, his colicky pains returned. October 1 he had colic for four days and was then jaundiced for two months. In November he was operated on again, for the fourth time, and black tarry fluid and one gallstone, soft and black and of the size of a cherry pit, were found in the gall bladder. A cholecystenterostomy was then performed and anastomosis with the colon completed. At last reports the button had not passed. The subsequent progress of the case is unknown to me. The gallstones in this case were like grains of gunpowder, and it was not to be expected that operative procedures would give much relief.

But this is an exceptional case, and it is a well-known fact that a simple cholecystostomy in a large majority of cases gives complete relief. The larger the stone, or stones, the greater the freedom from recurrences; the smaller the stones, the greater the liability to recurrences.

GANGRENE OF THE GALL BLADDER.

While it is a well-known fact that gallstones may lie in the gall bladder for years without giving rise to trouble, it is also well known that they will frequently produce a condition of inflammation of the gall bladder that may even suddenly eventuate in gangrene. I have met two cases of gangrene of the gall bladder.

CASE 2.—Dr. R., aged 62, was taken suddenly ill with severe pain in the abdomen. The bowels moved after the administration of a purgative. Temperature and pulse were elevated. Nausea. Some few years before he had had a severe attack of what was supposed to be typhoid fever, after which he suffered from terrible pains that were supposed to be due to indigestion. On examination of the abdomen fulness was felt below the edge of the liver. There was no rigidity of the right rectus muscle. Notwithstanding this fact the case was diagnosed as one of appendicitis. On opening the abdomen the appendix was found to be healthy. On looking further up a gangrenous gall bladder was seen snugly placed among inflamed intestines and omentum. The incision was enlarged, these adhesions were broken down readily, the gall bladder was opened and drained. The fluid evacuated was mucopurulent. Five gallstones were removed, one of them obstructing the cystic duct. A long glass drainage tube was placed to the bottom of Morison's pouch. Patient made an uninterrupted recovery.

CASE 3.—Mrs. W., who had a baby a month old, was taken suddenly ill early in the morning with severe pain in the abdomen. Her physician, Dr. T. B. Richardson, was sent for and he found her in great agony, and immediately administered a large dose of morphia. He was afraid that she would scarcely survive. Pulse was rapid and thready and the patient looked very ill. Improvement took place, but, later in the day, the pulse began to fail and he was again alarmed at her condition. I was sent for, but as I was out of town he decided to wait until the next day. In the morning the patient had somewhat improved. The temperature still remained high, having risen to 104 at the onset of the illness. She complained of one tender spot beneath the edge of the liver over the region of the gall bladder. There was slight puffing of the abdomen and vomiting. When I saw the patient the pulse was rapid and she was profoundly septic. A hard, tender, resistant spot could be made out over the region of the gall bladder, and I concluded that this must be another case of gangrene of the gall bladder. In order to share the responsibility I asked for another consultant before proceeding to operate. Very little hope was held out of the patient's recovery even with operation, owing to the septic condition. The abdomen was opened, the tense gall bladder was found, a large, green gangrenous patch involving at least one-third of its entire surface. The gall bladder contents were evacuated. The parts were too friable, swollen and thickened to permit of removal and on this account through-and-through drainage was established and the gall bladder area was packed off from the rest of the abdominal cavity by means of a large packing of iodoform gauze. During the convalescence it was necessary to again administer chloroform to remove the gauze, but the patient made an uninterrupted recovery. During the hurried manipulations, hurried owing to the patient's collapsed condition, no gallstone could be found.

It should be remembered that as the tender spot an inch and one-half from the anterior superior spine of the ilium towards the umbilicus points to appendicitis, so the tender spot an inch and one-half to the right and one inch and one-half above the umbilicus points to cholecystitis. Cholecystostomy was performed for the relief of this condition and was accompanied in the one case

by gauze drainage and in the other by tube drainage with recovery in each. Gallstones do not necessarily produce such severe inflammation as to lead to gangrene.

EMPHYEMA OF THE GALL BLADDER WITH GALLSTONES.

The next condition of which I wish to speak is that of empyema of the gall bladder. Inflammation has taken place and pus has been formed. The patient may be very ill in the acute septic condition, or may be in fair health while the gall bladder may be filled with pus that is almost sterile, as it is found to be in other situations in which it has been retained for a considerable time.

It has been stated that it is necessary and wise in this condition, as well as in that of gangrene of the bladder, to remove the entire organ. I consider that this is too sweeping an assertion. It is not necessary to remove the gall bladder in cases in which it is inflamed and septic and thickened from chronic inflammation and filled with pus. After it has been drained for a time and the offending calculi have been removed, the organ soon resumes its normal condition. I have considered it advisable, under such circumstances, to carry out intermittent irrigation of the organ by means of a small catheter placed in the gall bladder and attached to a douche tin. It is, as a rule, easy to fasten such a gall bladder to the abdominal wall owing to the fact that it has been considerably distended. Suppuration may be found in a gall bladder containing a few or many stones and with or without complete obstruction of the cystic duct.

CHRONIC INFLAMMATION OF THE GALL BLADDER CONTAINING CALCULI BUT NO PUS.

In these cases it is usual to find the gall bladder thickened, adherent, contracted and sometimes sacculated. There is evidence that the patient has suffered from many attacks of inflammation. The operation of cholecystostomy may be a very difficult one to perform, under the circumstances. If such a gall bladder is put on the stretch and fastened to the edges of the parietal incision it is liable to tear away. If stitched up and dropped back after the stones have been removed, the stitches are liable to tear out and permit of leakage, as it frequently happens that there is a partial obstruction to the flow of bile through the common duct. The operation of cholecystectomy, under the circumstances, would be a very difficult procedure. If sacculi are present it may be necessary to incise them individually and remove their contents and then to close the opening in a "sort of a way." Such closures can not be depended on to be water tight. I have treated such cases by passing a drainage tube into the gall bladder and stitching the opening in the gall bladder firmly around the outer wall of the tube. None of the stitches go through the tube. Gauze packing is then placed around the tube and another drain is either put into the bottom of Morison's pouch or carried through a counter opening at its lowest point. The gauze is removed about the fifth day and the tube in the gall bladder is removed about the same time. If a counter opening has been made in the flank this is not allowed to close for a couple of weeks. These cases may be very successfully dealt with in this manner.

CHOLECYSTECTOMY.

When a stone becomes blocked in the cystic duct the bile remaining in the gall bladder is decolorized after a time and nothing will then be left but a clear mucoid fluid. The gall bladder may become thinner and may remain freely movable below the costal margin on the

right side. While in this condition it may be so over-distended at any time as to become gangrenous, the gangrene usually beginning at its tip.

I operated on one such case where a sudden onset of pain and a tenderness on pressure over the gall bladder drew attention to the urgency of the condition. At the operation a very small gangrenous area could be made out at the end of the overdistended gall bladder. It is therefore advisable that all such cases should be operated on and the patient relieved from this source of danger.

The operation that should be performed, under the circumstances, is cholecystectomy; the entire gall bladder should be removed. This procedure can be carried out without difficulty. The tissues attached to the liver may be raised up with forceps and the finger can then be thrust into the layers of cellular tissue. Scissors will be required to cut through the peritoneum where it is dense. There is no hemorrhage to alarm the operator. The gall bladder is peeled off from the liver until the stone is reached; the duct is then further isolated beyond the stone and tied off with a fine silk ligature. Supporting sutures are placed over the end of the duct to bring peritoneum to peritoneum and act as an additional safeguard against a leak. It is wise to place a small strip of iodoform gauze down from the abdominal wound to the end of the cystic duct. Unless the operation of cholecystectomy is performed for this condition a mucous fistula may persist, and this may require a second operation for its relief. This secondary operation is a difficult one to perform owing to the fact that strong adhesions are now present. I met with these difficulties in one case, and for a few days after the operation despaired of the patient's life.

All operators seem to be agreed that it is wise to perform the operation of cholecystectomy in all cases in which we have a much distended and atrophied gall bladder with an occluded cystic duct. On one occasion I left three stones lying side by side in the cystic duct after having removed a large number from the gall bladder by cholecystostomy. The stones passed on without difficulty and the patient made an uninterrupted recovery. At the present time I would not allow the patient to run any such risk, but would remove the gall bladder and the cystic duct with the stones *in situ*. It was interesting to note in this case that when one stone had entered the duct other smaller stones followed.

I removed a gall bladder two weeks ago with the stone in the cystic duct. The undilated duct could be seen beyond the stone. After looking at the enormous distension it was easy to understand how stricture of the duct may be produced after the removal of the foreign body. The patient from whom this was removed made an easy recovery and the operation only consumed a few minutes.

The other indications for cholecystectomy are at present being discussed by the surgical world. Many surgeons consider that the gall bladder should always be removed for the conditions above mentioned, namely, gangrene of the gall bladder, empyema of the gall bladder, chronic inflammation and thickening of the gall bladder with or without contraction, and for cystic enlargement of the gall bladder. Others consider that this is too radical a procedure; that it is not necessary nor advisable, and that it is undoubtedly accompanied by a greater mortality than the operation of cholecystostomy. I feel satisfied that there is a danger that the pendulum may again swing, as it ever swings in the surgical world, too far toward the radical side, but to come back again, no doubt, in the course of time.

Let us for an instant consider the two analogous conditions, gangrene of the gall bladder with one or more stones in its interior, and gangrene of the vermiform appendix with one or more coproliths in its interior. Do we consider that it is always wise to remove a gangrenous appendix? Certainly not. There are times when we consider it wiser and safer to make our incision, to institute drainage and endeavor to isolate, with protecting gauze, the infected area. To dig down into and stir about these septic, infiltrated structures, under certain circumstances, is not good surgery. The same applies to the treatment of gangrenous conditions of the gall bladder. If, however, the organ can be readily removed and the tissues are not too friable to hold ligatures, it may be advisable to remove the offending organ, but, in my experience with two cases, the patient has not been in any condition to undergo such a prolonged operation.

Cholecystectomy does not produce a more radical cure than cholecystostomy. Even after cholecystectomy has been performed gallstones may form in the ducts in the liver itself and may be passed onward through them into the intestines. Owing to the fact that there is no cholecystitis to be encountered they are not large. I have seen, on one occasion, gallstones of medium size lying in a row in the hepatic duct above the junction of the hepatic and cystic ducts.

Langenbeck has denied that obstruction can result from stones forming in the biliary ducts outside of the gall bladder, but, as I have just said, I have seen such obstruction. The smallest stone in the row was nearest the liver. I was able to milk the stones down the hepatic duct and up from the common duct through the cystic duct into the gall bladder. The gall bladder had been opened and the gallstones were all removed in this manner.

The gall bladder is not known to be of any particular value and many animals are able to get along without it. It is occasionally found wanting in the human species. It has been said that the hemorrhagic condition of the mucous membrane of the gall bladder that is likely to occur as a post-operative complication after removal of gallstones, may be done away with by removal of the organ at the time of operation. Such hemorrhagic conditions are, however, rare. I have met with but one case, and at the postmortem examination it was found that the blood had come from a ruptured vessel in the liver, and, therefore, cholecystectomy would not have prevented death.

It has been stated as further argument in favor of cholecystectomy that by the removal of the gall bladder there is no danger of a recurrence of the cholecystitis, the disturbing element. I have not seen such disturbance occur after simple cholecystostomy and drainage if the stones have been thoroughly removed. It may always be desirable to remove the gall bladder for all the diseases to which it is liable, but the question to be answered is, is it always wise to do so?

In the presence of obstructive jaundice the operation of cholecystectomy is not advisable. The common duct being already obstructed it is desirable either to remove the stone and rely on the future patency of the duct for the relief of the patient, or to remove the stone and anastomose the gall bladder to the intestine, or to leave the stone *in situ* and perform cholecystenterostomy. It must be more difficult to anastomose the common duct itself than to anastomose the gall bladder to the intestine.

It has been stated that cholecystectomy should be con-

sidered as a curative operation, as it removes the cause of the disease. From what I have already stated I am satisfied that this is not so. Having seen large stones in the hepatic duct and in abscesses of the liver I am convinced that quite large stones may form outside of the gall bladder. There must, therefore, still be a danger of obstruction of the ducts even after the gall bladder has been removed. It would be interesting to ascertain whether the animals possessing no gall bladder suffer from gallstones.

A great deal has been said regarding the fistulæ that are left after cholecystostomy. They are not comfortable, but are undoubtedly curative, and, in the large majority of cases, they close without trouble. The only fistula that is troublesome is the mucous fistula, and, as we have already decided that the gall bladder should be removed in the cases in which the mucous fistula is liable to form, this difficulty is done away with. The fistula that forms owing to the fact that the common duct is still obstructed is a useful one, for without it the patient must undoubtedly continue to suffer from jaundice; and if it persists after having fulfilled its offices it may be done away with by making an anastomosis when the patient is in a greatly improved condition. So that we see the discomfiture to the surgeon and the discomfort of the patient have been blessings in disguise.

The formation of fistulæ teaches us that we should not use a large drainage tube for the purpose of draining the gall bladder. In this way the gall bladder opening can be reduced in size and the opening will close more quickly. Any suture used to fasten the gall bladder to the skin or the abdominal wound should be a continuous one, if non-absorbable, and it should be removed in a few days after operation. The drainage tube should be removed early except in cases of empyema of the gall bladder.

The argument that is used for the removal of the gall bladder in all cases owing to the fact that cancer is liable to supervene on gallstone irritation, is not based on a sure foundation. The surgeon does not propose to leave gallstones in the gall bladder to give rise to the irritation that is to lead up to the cancer, so that with or without a gall bladder this danger will be done away with.

The flow of bile into the gall bladder is greatest at night. It has never been demonstrated that patients from whom the gall bladder has been removed suffer in the slightest degree as a consequence of this fact.

CHOLECYSTENTEROSTOMY.

The operation of cholecystenterostomy can be performed by means of the elastic ligature or the Murphy button. I have used both and prefer the button. When the button is used care must be taken to allow long threads to float from the portion of the button placed in the intestine into the lumen of the gut. These silk threads become entangled in the fecal matter and the slight extra traction that is exerted has a tendency to draw the button toward the intestine and away from the gall bladder. I used the smallest sized Murphy button that I could buy and then had some very small ones, that I show here, made to order by Truax, Greene & Co. These have been used with perfect satisfaction to myself and to the patients.

After the bile has been diverted through the new channel the concretion impacted in the common duct grows smaller and disintegrates. I believe that it is quite possible that it may entirely disappear and that the bile may again proceed by the normal channel.

The reverse of this is the case so long as the bile is passing by the impacted calculus, owing to the fact that more bilirubin calcium is being precipitated on its surface until it may increase to a very great extent.

CHOLEDOCHOLITHECTOMY.

We have considered the treatment of stones in the gall bladder and in the cystic duct. We have now to turn our attention to the treatment of gallstones in the common or hepatic ducts. It is seldom that stones are met with in the hepatic duct. When they are met with they must be removed by pressing them down into the common duct, from which they may be removed by forcing them back through the cystic duct into the gall bladder, or they must be removed by direct incision. When a stone is lodged in the common duct it will be accompanied by an intermittent jaundice or a jaundice of varying intensity. The patient may be very deeply jaundiced for a great length of time.

The operation for the removal of the stone is in some cases fraught with such risk to the life and difficulty to the surgeon that it may be advisable to adopt another measure for the relief of the patient. An anastomosis between the gall bladder and intestine may be established. The colon is the portion of the bowel that can be most readily approximated to the gall bladder. Before this operation was carried out it was supposed that it was not advisable or, in other words, that the small intestine should be used instead. I have found that the patients do not have diarrhea as a consequence of the pouring of the bile into the large intestine or any digestive disturbances. When the small intestine is used it must be either drawn up over the colon or taken through the folds of its mesentery. I have anastomosed the gall bladder to the large intestine on several occasions with the most perfect results.

Owing to the advances that have been made in gall-bladder surgery cholecystenterostomy stands to-day in a different position. We can now incise ducts with impunity that can not, owing to their friability, be stitched, owing to the fact that we understand the safety given by careful and through drainage. The operation of cholecystenterostomy must now be recorded as rather a makeshift, only to be used when a patient is in a very bad condition.

On one occasion, when operating on a young woman, I found that she already had an anastomotic opening between the gall bladder and intestine that had been produced by the bursting of an inflamed gall bladder into the bowel.

It has been stated that the relations of the hepatic artery, the portal vein and the common duct may be changed and one of the vessels may run across the duct. If the positions of these important structures are altered the removal of a stone from the common bile duct is surrounded by a new and terrible danger. The condition might be detected during operation by a careful preliminary examination of the parts. Even when the structures are normally placed the operation is a difficult one. Much assistance can be attained by a forceps that I have had made by Stevens & Sons of Toronto. It is intended to replace the fingers of the left hand, to grasp the duct containing the stone and to draw it forwards to be within easier reach and away from the important structures beneath it.

The difficulty of the operation varies with the construction of the patient. It is more difficult to perform the operation on a patient with deep ribs than on one with short ribs. In all cases a large sandbag placed under the back and the transverse oblique incision should

be employed, taking care to keep the incision well down below the hepatic margin. The liver can then be pulled upwards and the stomach inwards and downwards and the colon downwards so that the field of operation may be brought well into view. It is always advisable to pack in sponges to drag down the stomach and intestines and to protect the general peritoneal cavity from infection. I find that this dragging down of the stomach is of great assistance.

If the forceps I have mentioned are not used the duct must be held forwards with the thumb and index finger or the first two fingers of the left hand. With the duct held down either by the fingers or the rollers of the forceps the operator must decide on the length of the incision into the duct that will be necessary for the removal of a stone. A large stone may be crushed and the debris can be removed with a small scoop. When the length of the incision into the duct has been decided on a purse-string suture should be placed beyond its limits, the incision must then be made in the center of the oval formed by the running suture. The stone having been removed and a probe having been passed through the common duct into the intestine the purse-string suture is drawn and tied and any further escape of bile over the field of operation is prevented. A supporting row of mattress sutures should now be placed to more securely close the opening into the duct. Before closing the abdomen it will be wise to place a small gauze drain down to the duct and to drain Morison's pouch by a single drainage tube from the front or by through-and-through drainage.

As I have said before, the intestine should not be opened for the purpose of removing a stone from the common bile duct. Such a procedure is not necessary according to the light of our more recent experience. It may happen that a malignant growth, a so-called cylindroma, obstructing the common bile duct is mistaken for an impacted gallstone. I have met with such a case in my own practice and have seen two similar cases in the practice of others. Under such circumstances the jaundice usually comes on suddenly without pain; it may be intermittent. A rounded mass will be felt after the abdomen has been opened that can only be differentiated from stone by means of a needle passed through the wall of the duct into the mass, or by means of the passage of a probe or a pair of forceps through an incision into the duct. Owing to its gritty nature a gallstone can be easily distinguished from a neoplasm. These growths are always rounded and not faceted and frequently move back and forth in the duct through a small space.

It is scarcely necessary for me to enter into a description of more than general details of these operations to such an audience. We all know that these operations can not be carried out successfully unless proper precautions are taken to prevent contamination of the peritoneal cavity. Sponges, absolutely sterile and plenty of them, must be made use of so that during the performance of the work all the intestines, except a portion of the colon and the stomach, are kept out of view. Sponges soiled with bile or gall-bladder mucus must be discarded and not used again during the performance of the operation.

And now, in conclusion, let me say that there are two great surgical principles involved in this work; firstly, thorough asepsis and thorough protection against the infection of any of the surrounding tissues; and, secondly, thorough and efficient drainage. If these two principles are kept in mind the operator can sacrifice

thoroughness in his work for the sake of the benefit of haste to his patient. Many of these patients do not withstand the shock of a prolonged operation and the length of time occupied is of great importance. In the pelvis we have been endeavoring to do away with drainage while in this region we provide the most thorough drainage. The conditions are different.

RECENT INVESTIGATIONS CONCERNING THE RELATION OF HUMAN AND BOVINE TUBERCULOSIS.*

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During the past year the question of the relation of bovine and human tuberculosis has been discussed by numerous investigators who have brought forward new facts and deductions and thrown much light on the subject. There has undoubtedly been greater activity in pressing the researches relative to this subject than at any other time in the history of medicine. The conclusions presented by Koch¹ at the British Congress on Tuberculosis were so unexpected and so different from the views of the majority of investigators that they have stimulated research, and in that way, far more than by any presentation of facts, have aided in elucidating the question.

THE INOCULATION OF MONKEYS.

One of the first lines of investigation which suggested itself as a means of throwing light on the transmission of bovine tuberculosis to man was the inoculation of monkeys. These animals being more closely related to man than any others, it was to be supposed that if man was immune to bovine tuberculosis, monkeys, if not immune, would at least show a certain degree of insusceptibility. The experiments of De Jong and of the Bureau of Animal Industry show that bovine bacilli are at least as virulent for monkeys as are human bacilli. Comparative tests have also been made under the direction of the Bureau of Animal Industry with tuberculin made from human and bovine bacilli, and it has been found that both varieties of tuberculin produce a reaction in tubercular cattle and also in tubercular people. These indirect experiments indicate, therefore, so far as they go, the near relation of human and bovine tuberculosis and the susceptibility of man to the bovine bacilli.

TRANSMISSION FROM MAN TO CATTLE.

A review of the older literature of the subject indicates very clearly that both Martin² and Chauveau³ produced tuberculosis in cattle in ingestion and inoculation experiments by the use of sputum and other tubercular material from man. More recently Arloing, De Jong and Ravenel have each produced tuberculosis in cattle by inoculation with tubercle bacilli obtained from the human subject. These experiments appear to be free from objectionable features, and it seems logical to conclude from them that while the human bacillus is less virulent than the bovine bacillus, the bacilli from different cases vary in activity and are sometimes able to produce a fatal tuberculosis in cattle. There are, consequently, no longer any grounds for the argument that bovine tuberculosis is not communicable to man because human tuberculosis is not communicable to cattle.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. Arthur R. Reynolds, George Cook and Heman Spalding.

INFECTION OF MAN FROM CATTLE.

Considerable light has also been thrown on the question of the transmission of bovine tuberculosis to man. Ravenel⁴ has reported four cases of direct inoculation of man with bovine bacillus, which occurred in Pennsylvania, and in which tubercular lesions developed at the point of inoculation. The writer⁵ has recorded a similar case reported to him by Naughton, which occurred in one of the Chicago abattoirs, and reviewed in a report to the American Public Health Association⁶ the cases of similar transmission which appeared to be most carefully observed and reasonably free from doubt. Ravenel has reported the inoculation of one of his assistants with the bovine bacillus which multiplied locally, produced a lesion at the point of entrance, and was recovered fifty-eight days after inoculation. The bacillus had apparently retained its original virulence during this period. Ravenel has also obtained a bacillus from an intestinal lesion of a child, which, when inoculated on cattle, apparently has all the virulence of the bacillus from bovine sources.⁷ Taking this in connection with the bacilli obtained from human lesions by Vagedes⁸ and Lartigau,⁹ which had the cultural peculiarities and virulence of the bovine bacilli, and it would appear that bovine bacilli, or others not distinguishable from them, have certainly been obtained from human tissues, where they had been multiplying and where they had produced disease. These investigations apparently answer in the affirmative the question that has been raised as to whether bovine tuberculosis is transmissible to man.

The frequency with which man is infected with animal tuberculosis can not be determined by the data now available, and the investigation of this question is surrounded with many difficulties. It has been made clear that we have no right to demand a primary lesion in the intestine as the criterion of ingestion tuberculosis. In experimental animals fed on tubercular material the oldest lesions are frequently found in the glands of the head and neck or even in the bronchial glands and lungs. While tubercle bacilli may pass through the stomach and penetrate the intestinal wall, this apparently is not the most common channel of infection from tubercular food. There are some authors who believe that even in inhalation tuberculosis the bacilli enter the tissues from the nasopharynx or pharynx, and seldom if ever follow the lumen of the air channels beyond the larynx. Now the pharynx, and probably also the nasopharynx, is as easily contaminated by infected food as by inhaled bacilli. It is difficult, therefore, to see how we can expect anything in the distribution of the lesions which will enable us to distinguish between ingestion and inhalation tuberculosis.

VARIATION IN THE BACILLI.

Probably the isolation of the bacilli from the lesions in man and the determination of their virulence will give some idea as to the frequency of bovine infection, but we must expect that in many cases the bacilli will be modified to such an extent that their source can no longer be determined. Ravenel¹⁰ infected pigs with the human bacillus, and on recovering it from these animals found that it had increased very much in virulence. The writer asked Dr. Schroeder to carry out an experiment by injecting human bacilli into the milk ducts of an adult cow, the idea being to determine whether or not they would multiply in this situation and increase in virulence. The injection was made without injury to the tissues, and was followed by enlargement and in-

duration in the quarter of the udder into which the injection was made, which persisted for more than six months. During this time a thick, creamy pus was formed in the milk ducts, and inoculations were made with this from time to time. The bacilli in this case appeared to lose their virulence, and as the period of their existence in the udder increased they required a longer time to kill guinea-pigs than at the time the infection was made. Later they appeared to have regained a part of the virulence which they had lost. It may be added further that the effect of this culture was far more persistent than that of dead bacilli injected in a similar manner. In the latter case an enlargement and induration of the quarter of the udder operated on occurred to almost the same degree as with the living bacilli, but the effect was transitory and disappeared in a few weeks. The experiments of Ravenel and of Schroeder therefore confirm many other observations which have been made relative to the instability of the virulence of tubercle bacilli.

The rapid modifications which these germs may undergo are shown by the increasing facility of culture after they have been grown a time in the laboratory, by the great variation in biological characters when inoculated into cold-blooded animals, as shown by Dubard,¹¹ and by the researches of Nocard and others in transforming mammalian bacillus into a stock having the characters of the avian, and vice versa. With these examples of the variability of the bovine bacillus before us, it is impossible to admit that the bovine bacillus, when it infects mankind, should always be recovered with its original morphological characters and cultural peculiarities. It would appear that it may retain these in certain cases and in others it may lose them.

STATISTICS OF TUBERCULOSIS AMONG CHILDREN WHO TAKE COW'S MILK.

It has appeared to me that we might obtain some indications from statistics as to the frequency of human infection from animal sources. While not losing sight of the fact that pulmonary tuberculosis may be caused by ingestion as well as by inhalation of the bacilli, we may nevertheless admit that by far the greater number of cases of pulmonary tuberculosis are the result of infection by inhalation. This being the case, we should expect to find a difference in the rate of increase or decrease of tuberculosis of the lungs as compared with other forms of tuberculosis.

Thorne's table¹² is as interesting and instructive now as it was when he published it in 1898, and notwithstanding the critical examination of the subject which has since taken place, the bearing of it appears plain and incontestable. This table shows that in England and Wales between the periods 1851-1860 and 1891-1895 there was a reduction of the mortality at all ages from phthisis or pulmonary tuberculosis of 45.4 per cent., while the reduction of the mortality at all ages from tabes mesenterica or abdominal tuberculosis was but 8.5 per cent., or less than one-fifth as much. And what is more remarkable, the mortality from tabes mesenterica in children under one year of age actually increased 27.7 per cent. for the period referred to.

Some years ago a publication was issued by the State Board of Health of Massachusetts entitled "The Vital Statistics of Massachusetts, 1856-1895." In this compilation the two years 1856-57 was contrasted with the two years 1894-95. In the two years first mentioned, for the period under five years of age, there were 46.3 deaths from pulmonary phthisis to 1,000 deaths from all causes. In the two years last mentioned there were

but 15.6 deaths from pulmonary phthisis to 1,000 deaths from all causes, or one-third as many. This is a very gratifying reduction in the phthisis death rate. Let us see now how it is with other forms of tuberculosis. In the two years first mentioned there were in the same age class 70.7 deaths from other forms of tuberculosis to each 1,000 deaths from all causes; and in the two years last mentioned there were 96.2 deaths from other forms of tuberculosis to each 1,000 deaths from all causes. That is, in this forty years there appears to have been an increase of 36 per cent. in the forms of tuberculosis other than phthisis in the class under five years of age, while there was a reduction in the mortality from phthisis at all ages of about 45 per cent. Are these statistics worthless or do they mean something?

I have also examined the statistics of Michigan, and I find that in that state during the years 1870 to 1884, inclusive, taking the class under five years of age, there were for each 100 deaths from consumption 81.8 deaths from other forms of tuberculosis; during the years 1885 to 1897, inclusive, there were 104.3 deaths from other forms of tuberculosis to each 100 from consumption; while during the three years 1898 to 1900, inclusive, there were 263.3 deaths from other forms of tuberculosis to each 100 from consumption. Why this tremendous increase in the mortality from other forms of tuberculosis as compared with consumption at what has well been called the milk-drinking age of life?

Gottstein,¹³ in a recent study of this subject, concludes that among children in Berlin the mortality of those at the breast is but slightly more than half as much from tuberculosis as among those otherwise nourished, the proportion as he finds it being as 6 to 10. He also finds, in studying the statistics of 23 large cities and university cities, where the returns are especially reliable, that whereas there has been a reduction of the mortality at all ages from tuberculosis, this reduction has been distinctly less in children under 15 years of age than in persons over that age. From this he concludes that "the thought is not to be set aside that in the etiology of tuberculosis in children and in grown people very important differences must occur. There must be assumed for the infection of children another source than for that of grown people, and it certainly is natural to conclude from the difference established statistically that the source of children's tuberculosis is to be sought partly in nourishment with milk containing tubercle bacilli, while the decrease since 1894 is to be traced back to the better general and individual prophylaxis in the care of milk."

I have recently compiled a table showing the deaths per million population from different forms of tuberculosis, taking the last year for which returns are available. From this the deaths from *tabes mesenterica* or abdominal tuberculosis are, at all ages, as follows: New York City, 13; Chicago, 17; Boston, 32; Berlin, 40; Paris, 61; London, 221; England and Wales, 202; Scotland, 223; Ireland, 231. The great preponderance of this disease in Great Britain and Ireland is remarkable. On another occasion I endeavored to explain this partly by the different conditions existing in the countries covered by these statistics; that is, there is very much more tuberculosis in cattle in European countries than in the United States; there is far better protection by meat inspection in the United States and the continent of Europe than in Great Britain and Ireland, and there also appears to be more universal sterilization of milk on the continent.

EUROPEAN VS. AMERICAN CUSTOMS AS TO STERILIZATION OF MILK.

I have been interested in reading the opinion of Prof. H. W. Conn,¹⁴ written some years ago, with reference to this subject. In his report on "The present attitude of European science toward tuberculosis in cattle," which was prepared after visiting the different countries of Europe and studying the conditions there, he said:

"Furthermore, it is a fact that in most European countries milk is not drunk raw to any very appreciable extent. Nearly all of continental Europe has, in the last few years, acquired the habit of sterilizing the milk before using it. In some countries this is almost universal. In Switzerland the children are taught the danger of drinking milk without sterilizing, and at the present time the amount of milk drunk without some kind of preliminary heating is comparatively small in continental countries. On the other hand, in England and in the United States the habit of sterilizing milk has not obtained much foothold. While milk is sterilized frequently for use among infants and invalids, there is no such general custom as in Europe in this direction, and in these countries we may say that the great bulk of the milk is drunk without sterilization. Now if milk were a considerable source of tuberculosis it would be inevitable that we should find a difference in the statistical results from countries where milk is used raw, and those from countries where it is sterilized."

It is immaterial to our argument that Professor Conn failed to find the difference between the statistics of Great Britain and of the Continent which he thought should exist if milk were an infective agent. We know now that such a difference does exist fully as great as could be expected. What we are specially interested in is the reason for this difference.

The figures quoted appear to indicate a considerable number of cases of disease in man originating from contaminated food, but still it must be admitted that this evidence is indirect and not altogether trustworthy. It must be taken as an indication rather than as a positive demonstration. Considered with the other evidence that has been mentioned, it justifies us in assuming provisionally that there is considerable danger to human health from the ingestion of food containing living tubercle bacilli.

In conclusion, it appears that there is now sufficient evidence to prove that tubercle bacilli of human origin may infect cattle and produce a progressive and fatal disease in them; also, that tubercle bacilli from bovine sources may infect man and produce a progressive and fatal disease. Ingestion tuberculosis may have its starting-point in the glands of the neck or thorax, or even in the lungs, and the number of cases of human tuberculosis showing a primary intestinal lesion is no indication of the number of cases which occur from ingestion. We must depend largely on clinical evidence for a determination of the relative frequency with which man is infected by tubercular food.

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THE INTERTRANSMISSIBILITY OF HUMAN AND BOVINE TUBERCULOSIS;

A REVIEW OF THE EXPERIMENTAL EVIDENCE.*

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Within the past two years a number of articles have appeared beside that of to-day more or less exhaustively reviewing the evidence as to the frequency or possibility of human tuberculosis originating by contagion from cattle. Such evidence as we can obtain must necessarily be circumstantial. Even if it were permissible to make direct inoculation or infection experiments on the human being, a settlement of the question could only be obtained by a series of comparative tests on many individuals with tubercle bacilli of human and bovine origin respectively, and accompanied by all the safeguards to exact experimentation which have been found necessary in our similar tests made on cattle. We can therefore see the folly and the futility of those oversanguine experimenters who propose to decide the matter by one clumsily conducted inoculation test on a human victim. Truly, "Fools rush in where angels fear to tread."

Beside the experimental evidence—along with which I include that which is derived from a comparison of the biologic characters of the bacilli—we may obtain some information from other sources: from a comparative study of the naturally acquired disease in man and animal in reference to its contributory causes, its course, its anatomic and histologic features, and from the records of accidental inoculation or supposed ingestion infection of human beings from bovine tubercular products. This part of the subject having been already discussed I shall limit myself to a few remarks on certain points only which have come under my own observation.

CONTRIBUTORY CAUSES.

With the exception of certain minor influences which are not in operation in the lower animals, contributory causes are closely comparable in the human and bovine animals. In a recent paper¹ I have attempted to show that in human as in bovine tuberculosis by far the most important of these so-called auxiliary causes is the universally prevalent disregard of adequate ventilation requirements in sleeping rooms and stables. Above all other conditions tuberculosis is associated with overcrowding—among cattle practically confined to stabled herds; in human beings the special scourge of the tenement houses, infrequent or even unknown among races of primitive habits yet exempt from the insanitary vices of our modern civilization.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. Arthur R. Reynolds, George Cook and Heman Spalding.

The course of the disease in cattle is not dissimilar from that of man. It is, as a rule, chronic, phthisis or pining, only showing itself as a late symptom. The number of animals showing any symptoms is only a small percentage of those actually infected. Recovery of individual cases under favorable conditions no doubt does occur, but on this point we have little knowledge. Latency or non-progressiveness appears to be as common a feature as in mankind.

THE BOVINE ANATOMIC LESIONS.

The anatomic lesions of the bovine disease are characterized by their predilection for the serous membranes, the magnitude of the tubercle conglomerates, their fibrous structure and tendency to calcareous deposits, and finally by the relative scarcity of tubercle bacilli. Ulcerative lung lesions are less common than in man, and for this reason the bronchial discharges are relatively less abundant and poorer in their content of tubercle bacilli. When pulmonary cavities or vomicae do occur in cattle, the discharge is as profuse and the numbers of tubercle bacilli as great as in advanced pulmonary phthisis of man. Moreover, the tubercle bacilli present in such specimens do not differ morphologically from those of human sputa. These facts I have been able to demonstrate from specimens of ulcerative lung disease in cattle obtained many years ago, and now on exhibition here. In regions not open to external infection, as in lymph nodes and on serous membranes, the necrotic tissues do not liquefy and become purulent, but appear either as tough coherent masses or as accumulations of unorganized debris of butter-like consistency in which tubercle bacilli are usually difficult of demonstration. Specimens illustrating these conditions may be seen in all museum collections of cattle tuberculosis.

In the records of accidental infection of mankind by bovine tubercular products either by inoculation or supposedly by ingestion in milk we have an important source of evidence as to the transmissibility of the disease. On account of the extreme prevalence of human tubercular disease and the impossibility of tracing the source of infection, it is obvious that this evidence, unless carefully weighed, may easily lead us astray. It also is really little better than circumstantial. I have nothing to add to the able reviews of this part of our subject which have recently appeared.

EVIDENCE FROM EXPERIMENT.

Experimental evidence as to the identity or otherwise of human and bovine tuberculosis is not of recent date only, for we find that inoculation and feeding tests of tubercular products from man and from cattle had been made on various species of animals long before the bacterial nature of the disease was demonstrated. In an earlier report² I have summarized the records of such of these experiments as admitted of comparison. Although these earlier infection tests were seldom designedly comparative, they nevertheless, when collectively reviewed, enabled us to recognize the same differences in the effects of the human and bovine virus which have recently been more clearly demonstrated by comparative infection tests with cultures. Nevertheless, the interpretation by different investigators of the results obtained in the past, has been no less contradictory than at the present day.

Such investigators as Chauveau,³ Klebs,⁴ Crookshank⁵ and others who have infected cattle with human tubercular virus have expressed the opinion that the resulting lesions are identical, anatomically and histologically,

with those of Perlsucht—the naturally acquired cattle disease.

Creighton,⁶ Pütz,⁷ Klein and Gibbes⁸ are among those who, from similar experiments, arrived at the opposite conclusion; namely, that there was not only a difference in virulence of human and bovine tubercle when inoculated in cattle, but a difference also in the kind (as well as degree) of the resulting lesions.

The structure of the new formations induced by such inoculations in different species of animals, can not well be studied apart from the extent of these lesions; consequently, in reviewing the more recent work in this line I shall consider these two features together.

Up to the date of Koch's memorable discovery of the bacilli of tuberculosis, apparently identical in man and cattle, there was, as we have seen, a difference of opinion among pathologists as to the identity of the disease in the two species. It had been repeatedly demonstrated, for instance, that the bovine tubercular virus produced by inoculation in the rabbit more extensive lesions than sputa derived from human consumptives. Furthermore, a critical study of infection tests made by different authors, such of them as admit of comparison, will show that this higher virulence of the bovine tubercle was exhibited also toward other animal species, and more especially toward cattle.

This fact not being clearly brought out by comparative tests made by any one investigator did not receive due recognition. Pütz (1884), however, as a result of his researches, makes the following statement: "A susceptibility of cattle for the tuberculosis poison of man, and of the latter for the Perlsucht poison of cattle is not shown by any observations which are entirely free from objections." In his own experiments the results were always negative in bringing about in calves a typical Perlsucht with human tubercular material, but positive in producing a local development of tubercles containing the specific bacilli—"lesions no more representative of the typical tuberculosis of cattle than are the vaccination pustules representative of variola proper."

Against this view may be placed that of Chauveau (1891), another investigator, who on several occasions had made comparative infection tests on cattle, and claims for his experiments the first complete experimental demonstration of the identity of the human and bovine disease. He states that "human tubercular virus reacts towards the bovine species exactly like tubercular virus coming from cattle."

With the discovery of the bacilli identical in their staining reactions in human and bovine tubercle, similar in cultural features, and in their effects on the guinea-pig, the etiologic identity of human tuberculosis and Perlsucht of cattle was generally conceded by pathologists, practically all writers on tuberculosis emphasizing more or less the dangers of human infection from the use of the milk of tuberculous cows. On the other hand, veterinary authors have generally assumed that the human consumptive may be a source of infection for the cow stable. It was with the view of testing this latter proposition that my own experiments in feeding calves with the expectorations of human consumptives were begun in 1896. In the same year was published the first report of Theobald Smith's inoculation experiments on cattle,⁹ the earliest comparative tests which had been made with cultures.

Frothingham¹⁰ (1897) made communication of his inoculation experiments on calves with tubercle bacilli cultures of human origin. In the following year a

further report¹¹ was made by Smith of more extensive experiments undertaken in conjunction with the Massachusetts cattle commissioners.

Although my own sputum infection experiments for the Arkansas Agricultural Station were commenced independently, I am glad to admit that my later tests with cultures were modified, if not suggested, by those of Theobald Smith, to whom undoubtedly belongs the priority in this as in many other important lines of investigation and achievement in comparative pathology. Referring briefly to these experiments of my own, they were undertaken in order to test, as I have said, the possibility or likelihood of tuberculosis of cattle, and especially of dairy cows, having its source in the expectorations of consumptive attendants. I need not emphasize the vast importance of exact knowledge on this question from the standpoint of agriculture as much as from that of public health.

My experiments included (1) feeding tests on cattle with human tubercular sputum, (2) comparative inoculation tests on cattle with human and bovine tubercle respectively, and (3) similar inoculation tests with artificial cultures of tubercle bacilli from these two sources on cattle, sheep and swine. About the same time Pearson and Ravenel, of the University of Pennsylvania, were engaged in similar investigations, their infection tests also embracing a number of different species of the domesticated animals. The report of this work has lately been published.¹²

Koch and Schütz of Berlin have furnished the latest contribution to this line of investigation in the address of the former¹³ at the British Tuberculosis Congress of last year (1901). Although no new facts were brought to light by their experiments, the results of which were merely confirmatory of those previously obtained by American investigators, this address, as is well known, attracted world-wide attention on account of the great scientific reputation of the author and the somewhat extreme interpretation which he placed on the results obtained.

During the last year numerous other experimenters have been stimulated to a repetition of these inoculation tests on cattle with human tubercle, and even human martyrs have offered themselves, and been accepted by over-sanguine investigators, for inoculations from the bovine. Already we read of results: Calves have been successfully killed by sputum inoculation and human beings successfully infected (and cured) after inoculations from cattle; but we may well postpone any review of the work of these over-hasty experimenters until their enthusiasm moderates.

The more extensive and accurate of these recent experiments, namely, in order of publication, those of Smith, Dinwiddie, Pearson and Ravenel, Koch and Schütz, although not all co-extensive in design, have been practically in agreement in their results. It is therefore unnecessary to review each of them separately, and the summary which I here present is mainly the results obtained in my own experiments.

Inoculation of artificial cultures of the bacilli of bovine tuberculosis into the peritoneal cavity induces in calves, sheep and swine a rapidly progressive disease, early extension to the thoracic organs and death within a few months. Cultures of human origin (sputum) similarly inoculated, occasion in cattle a local eruption of tubercles over the serosa, especially abundant on the free omentum and in the sulci between the coils of the large gut. A tuberculin reaction may be obtained two weeks after inoculation. Sometimes no reaction is ob-

tained, and in all my cases this reaction was absent four to five months after inoculation. The initial lesions are similar in kind to those produced by the bovine germ, the difference showing itself later by retrogressive instead of progressive changes. If killed within a few months there may be found in addition to the tubercles mentioned above, and now already calcareous, a greater or less formation of pendant fibrous fringes and small papular or pedunculated fibrous nodules outgrowing from various parts of the serous coating of the viscera. The abdominal lymph nodes may or may not be involved. If kept for a year or more before dissection all traces of earlier changes may have disappeared. This, at least, has been my experience, and I have seen no impairment of health in cattle as a result of such infection from the human. I should not, however, dispute the possibility of inducing fatal disease in these animals by such inoculations. If the initial changes above described be so excessive as to impair the recuperative power of the tissues or their resistance to further invasion, the animal may succumb in a short time, either from the magnitude of the local changes or from unchecked generalization of the bacilli. Very young or feeble experimental animals, unhygienic surroundings, intravenous inoculations or intraperitoneal inoculations of impure cultures, such as we find in sputum, are the conditions on which we might suppose such a result to depend.

In sheep, human tubercle bacilli produce similar results as in cattle, but the local lesions are more extensive and more persistent. Pigs exhibit a somewhat greater susceptibility and may contract a progressive disease from such inoculations.

Generalization of the bacilli by way of the blood stream occurs in cattle, sheep and pigs, with formations of incipient miliary tubercles, which later become abortive in development, and are found on dissection as minute white points throughout the lung or as calcareous seed-like encapsuled granules in lung or spleen. On the other hand, if in pigs there is a pre-existent or intercurrent pulmonary disease generalization is followed by changes similar to those induced by the bovine germ—progressive miliary tubercles with enormous multiplication of tubercle bacilli in the lung tissue or its morbid secretions. Inoculation of sputum instead of pure cultures may act in a similar manner by producing a mixed infection.

BIOLOGIC CHARACTERS OF THE BACILLI.

The remarks which I have to make under this heading are mainly derived from notes of rather hurried observations made during the progress of the inoculation experiments described in Bulletins 57 and 63 of the Arkansas Agricultural Experiment Station. They are somewhat fragmentary, but on the whole are in close agreement with the facts as observed and more fully described by Ravenel.

Tubercle bacilli, as has been frequently noted, present considerable variation in morphology under different conditions of growth. In sputum they may be long or short, straight or bent, granular or homogeneous in staining. A similar variability occurs in the bovine germ, and hence comparison is less exact than in species of more constant morphology. In general, bovine tubercle bacilli are shorter than those of man. In the caseous masses of tubercular lymph nodes in cattle the bacilli are usually rare, but occasionally I have found isolated collections of such material in which the bacilli were present in large numbers. In such of these speci-

mens as I have seen the bacilli are uniformly short, granular or solid in staining, and not thicker than the bacilli of sputum. In ulcerating lung disease of cattle, as we have seen, this peculiarity in morphology is not present, the bacilli in such cases being undistinguishable from those of human sputum. I have not as yet had the opportunity of examining a sufficient number of specimens of bovine tubercle to venture an opinion as to the conditions on which this peculiarity in morphology, the short so-called bovine type, depends, but preserved specimens in my collection—cover-glass preparations—from other animals which have been infected with both the human and bovine bacilli, illustrate the following facts:

In the pig and sheep which have died from inoculation with bovine tubercle bacilli, the short form is not preserved. Smear preparations from the incised lung in both these species, the disease being generalized, show tubercle bacilli in great abundance and of the usual sputum conformation. In the pig, where I have also under certain conditions (a pre-existent swine plague pneumonia, or crude sputum inoculations) obtained a fatal generalized tuberculosis by inoculation with the human germ, the morphology of the bacilli is similar to that of bovine tuberculosis in the same animal.

In the rabbit and guinea-pig inoculated with bovine cultures exhibiting the short form, the results have been variable. I have slides in my collection in which the short type of bacilli can be recognized in smear preparations from these animals, while in others longer and medium forms predominate.

As to the form which sputum tubercle bacilli assume when grown in the organism of cattle I have unfortunately made no observations. In sheep and pigs the usual sputum form is maintained. In cattle the lesions resulting from such inoculations have been so slight and their contained bacilli so rare that no exact comparison is possible from any preparations in my possession.

In artificial cultures the bovine germ maintains the short type with more constancy. This has been especially observed by Smith in growing the bacilli on pasteurized dog serum. On the medium which I have usually employed—glycerinized beef serum—although the short form usually predominates, the distinction between these and cultures from the human is not always appreciable. Bovine cultures are more difficult to start and generally make a feebler growth than human. The naked-eye appearances depend chiefly, I think, on the scantiness or luxuriance of the culture. On Löffler's medium I have noticed that the human germ assumes the short form of the bovine.

An explanation of the conditions on which this variability depends is not possible with our present knowledge. It is manifest, however, that the source of the bacilli in the sputum of the human consumptive—human or bovine—is not to be determined by their morphology.

In comparing the animal tuberculosis with that of man, we have limited our discussion to the bovine disease. Tuberculosis, however, occurs in other mammalian species. It is not rare in pigs and is occasionally found in horses, dogs and cats, while a very few instances are on record of its occurrence in sheep and goats. Wild animals in the state of nature are, I believe, entirely exempt, but under confinement in cages some species are peculiarly liable to fall victims to this disease. Are we justified, in view of these facts, in assuming the existence of races of tubercle bacilli peculiar to each zoölogic species in which tuberculosis naturally

occurs? The very rarity of the disease in most of these species precludes this idea.

In pigs the source of infection can be traced to ingestion of the milk of tuberculous cows. Cats and dogs are infected in the same manner, or from close association with their consumptive owners. Although under conditions of close confinement, as in menageries, we may well believe that transference of the disease may occur between animals of the same species, the original source of infection is probably in all cases extraneous—either from mankind or from cattle.

In the case of the human and the bovine disease the conditions are different. In both these species tuberculosis is an extremely common affection. Contagion in cattle tuberculosis can frequently be traced without difficulty, and its source is in other cattle similarly diseased. We have seen from the experiments just described that a human origin of the cattle disease is hardly conceivable. If it occurs at all it must be under most exceptionally rare conditions. On the other hand, we may assert, I think without begging the question, that in most cases at least human tubercular disease has its origin so far as contagion is concerned in other similarly diseased human beings. We have here, then, the conditions on which depend the evolution of stable racial characteristics in the bacteria; namely, long-continued invariability of environment. We find, therefore, in these facts a theoretic justification in assuming, at least hypothetically, the existence of two races of mammalian tubercle bacilli, the human and the bovine. Practically this assumption is supported by the facts in reference to differences of morphology and pathogenic virulence just discussed.

DEDUCTIONS.

From the foregoing data we have now presented to us the task of deciding whether the experimental evidence tends to support or to refute the view that human consumption may at times have its origin by contagion from cattle. I can best introduce my own views on this matter by a quotation from my first report on tuberculosis, already referred to: "It can not be said that the facts here presented remove the question in any degree out of the domain of speculation. They really furnish more food for theorizing, and may either diminish or increase our suspicion of dairy products according to the process of reasoning employed. It may be argued, for instance, since bovine tubercle bacilli have been shown to be equally as virulent as those of human origin for all animals tested, and more virulent for some, the presumption is that they are more virulent for mankind also. Contrarywise it may be said that human tubercle bacilli being shown to be less adapted for growth in cattle than the bacilli of bovine origin, there is reason for believing that the converse may also be true." "If the bovine bacillus be regarded as merely a more highly virulent modification of the human variety, this should be shown by the greater gravity of the lesions produced by comparative inoculation experiments on all species of susceptible animals. If, however, there is a selective feature shown by such inoculations, the excess of virulence of the bovine variety being manifested only toward certain species of animals, some support would be gained for the theory of a distinction of races other than that founded on a mere difference in degree of pathogenic activity."

The tests necessary to determine this latter point have since then been made and the records are contained in my second report¹⁴ on tuberculosis (1900).

The bovine tubercle bacillus has been shown by these

experiments to possess an indiscriminate and not a selective excess of virulence over the human specimen. Similar results have been obtained by Pearson and Ravenel of Pennsylvania and by Koch and Schütz of Berlin.

In a purely speculative question it is a matter of everyday experience that the same data may lead to entirely different deductions. Professor Koch, whose attainments and achievements in bacteriology we all respect, has deduced the inference, largely, as we infer, from his experimental work on animals, that bovine tuberculosis can constitute no factor in the initiation of tuberculosis of man. Few of us, I think, will be able to follow this process of reasoning. Whether or not his view is correct it can hardly be said that it derives any support from the purely experimental evidence. I think there is a wide field for investigation yet to be covered before we as sanitarians can feel justified in recommending the discontinuance of those safeguards against infection from tuberculous dairy products which an unwilling public are just beginning to appreciate.

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DISCUSSION*

ON PAPERS OF DRs. KNOFF, APPEL, CARRINGTON, BONNEY, STUBBERT, SALMON AND DINWIDDIE.

DR. M. P. RAVENEL, Philadelphia—We can hardly speak of this question without bringing in Koch. As you are aware, he laid down two propositions: First, that human tuberculosis differs from bovine and can not be transmitted to cattle; and second, that if man is susceptible to infection from cattle at all it is so rare an occurrence as to make precautions unnecessary. Now the first of these propositions is capable of being subjected to experimental proof. You will remember that Koch, in the experiments conducted by Shütz and himself, did not succeed in producing bovine tuberculosis with the human bacillus. In my opinion the conclusions of Koch were based on an insufficient number of experiments. At the laboratory of the State Live Stock Sanitary Board of Pennsylvania, we have succeeded in doing what he failed to do, and I have placed in the Scientific Exhibit specimens of animals that were infected with the human disease. One shows the liver and diaphragm to be affected. This was the result of an attempt we made at obtaining immunization; we got a result we did not wish for, but one that is of importance in establishing the fact that human tuberculosis can be communicated to animals. We must acknowledge that bovine animals, as a rule, show a high degree of resistance to infection from man.

Generally speaking, the pathogenic power of the bovine tubercle bacillus is considerably greater than the human for all experimental animals. Of course, this does not prove that bovine tuberculosis can be transmitted to man, but this can be proved without any trouble. We can not, it is true, carry out experimental tests as we do on animals, but there is a large

* The papers of this Symposium on Tuberculosis which have already appeared will be found in the following issues: Dr. Knopf, November 22 and 29; Dr. Appel, November 29; Drs. Carrington, Bonney and Stubbert, December 6.

The Symposium will be completed later by the following paper and its discussion:

Sanitary Measures for the Prevention of Tuberculosis in New York City, and Their Results. Herman M. Biggs, M.D., New York City.

the hands and extending to the forearms were several papules interspersed with scaly patches. The disease appeared for the first time March 16, and had accordingly existed only one month. The patient did not recall any previous eruption. The general health was good and no systemic cause could be assigned. The disease disappeared on the approach of warm weather a few weeks later. As the family moved away from Cleveland nothing further has been heard of the case.

CASE 18.—L. J., female, aged 32, seen April 29, 1895, presented a thick, fissured patch on the back of the left hand, which was well defined, slightly exudative and covered with thick crusts. The patient is right-handed. The margin of the lesion was slightly elevated and stood out in bold relief. There was a dark red or purplish tint especially noticeable when the hands were dependent or cold. The history of the disease as given by the patient is as follows: Nine years ago, during the winter, the eruption first appeared on the left hand. It disappeared at the approach of warm weather, and reappeared each successive winter, its advent, as nearly as the patient can remember, being co-existent with that of frost. Within a year or two of the first invasion the right hand became affected in like manner. Of later years this lesion has disappeared completely, while the patch originally invaded



Fig. 1—Dermatitis hiemalis, acute attack, the disease having existed for several years

on the left hand has continued to return in the same site each winter.

CASE 19.—L. D., female, age 16, first presented herself April 14, 1895. The patient was employed in a candy factory and handled colored powders. The eruption was situated on the back of the hands and on the fingers. The family history shows nothing of importance bearing on the disease. She gave the following history of the eruption: From the age of one to six years she had eczema, with pus oozing from fissures about the joints and on different parts of the body. After the age of six there was no disturbance of the skin until 1895, when at the approach of cold weather in January the present disease appeared. There was first noticed a roughness about the mouth, the skin became dry and was easily irritated, and this soon appeared on the dorsal surface of the middle finger of the left hand (the patient was right-handed). From this region it spread by the formation of similar roundish spots, quarter dollar in size, which gradually enlarged at the periphery until they attained the size of a silver half dollar. They were dark red in color, at times very itchy, worse at night, and especially when in bed. There were, at the time of examination, six spots on the back of the left hand. The palms were free. About two months ago it also came on the dorsal surface of

the right hand. These were smaller, being dime sized and six in number. The skin of the neck is also rough and slightly red, similar to that about the mouth. The patient has never had chilblains nor does she habitually complain of cold hands or feet. In making a diagnosis the following note was appended: "Dermatitis hiemalis, occurring in a skin predisposed to eczema. Just how much influence her occupation has on its causation is difficult to say. The present attack appeared during unusually cold weather."

CASE 20.—J. H. A., male, aged 3, seen Nov. 7, 1895. Sought relief for a disease of the skin of eighteen months' duration. It appears only on the exposed parts of the body, is of red color and feels rough. It was first noticed during cold weather, and the mother has noticed that it is always aggravated by cold. During the summer months it almost completely dis



Fig. 2—Dermatitis hiemalis occurring on the hands and legs, very rare occurrence

appears. The patient was under treatment during the whole winter. My next note was on Feb 15, 1898, the area involved being somewhat rough and inclined to fissure.

CASE 21.—G. E. C., male, aged 42, presented himself May 5, 1896. Patient complained of well-defined lesions which occurred on the back of the hands every winter and disappeared during the warm weather of summer. They always returned in the same positions, always occupying the same sites. There was nothing in the case calling for special description.

CASE 22.—L. P., female, aged 34, seen March 27, 1896. The disease came first in February, 1892, and has since returned each March and has always disappeared early the following summer. This year it appeared during the cold weather which occurred during the first part of the month. It is limited to

the back of the hands, and occurs in circumscribed spots. It has extended up the forearms to a slight extent. A piece of skin was removed for microscopic study. As a child the patient was troubled with chilblains and had eczema of the face. My notes show that on April 3 the hands were better. This date followed a spell of warm weather which had prevailed for a week or more. Then there came a heavy snow storm with northwest winds, and the patient immediately became worse with chills and cutis anserina.

CASE 23.—W. T., aged 35, was seen April 17, 1899. The disease first appeared four years ago, in the form, according to the patient's statement, of a "dry blister," or a "small vesicle," not itchy, and later accompanied by "small blisters leaving crusts" in patches about the size of a dime. The following winter it broke out again and was very itchy, accompanied with much watery exudation. It has, the patient says, returned every winter since, and usually leaves during the summer. If present at all during the warm weather, it is only to a slight extent, and is then attributable to some slight irritation. On the back of the left hand (the patient being right-handed), there were two or three lesions about the size of a silver dollar. They were irregular in outline with prominent margins; some were fissured and dry, while the majority were moist, and in all slight itching was complained of. They had never appeared on the right hand nor on any other part of the body. During the spring of 1901 the patient returned for treatment; the hands were in a very bad condition, although not changed in character. The patient says last spring they gave but little trouble.

CASE 24.—E. H. P., female, aged 40. Under date of April 26, 1899, occurs the following note: "Disease occurred on the back of hands. First came in February of this year on the back of one hand. The lesion gradually extended and new spots are now appearing on the opposite hand. Patient complains of burning and itching. It looks like ringworm, has a prominent margin with a dry, scaly central area. General health good."

CASE 25.—J. E. T., male, age 26, dry-goods clerk, sought advice Nov. 1, 1900. He gave the following history: The disease first appeared three years ago, coming at the first approach of cold weather. The right hand was the most seriously affected, consisting of circumscribed patches, appearing in size from a dime to a half dollar. They were very itchy and always disappeared in summer.

CASE 26.—C. M., female, aged 25, servant, first seen Oct. 29, 1901. She presented a typical picture of the affection herein described (Fig. 1). The patient came to Cleveland from Ireland five years ago. In January of the following winter the present disease began. It appeared on the back of both hands. It remained during the winter and at the approach of warm weather became better, although the patient noticed a slight irritation on the back of the hands during the summer, so much so that she did not think she was entirely free from the eruption. The following winter it became aggravated, and during the present year it has appeared again with unwonted severity. There were, at the time of her first visit, reddish ringed lesions which tended to heal in the center while the margin was elevated and presented a more active inflammation. The patient complained of burning and itching. The left hand was worse than the right (the patient is right-handed). On the left hand there were two lesions, the size of a twenty-five-cent piece, of a brick-dust color, somewhat ring-shaped, which looked like ringworm. The eruption was moist, especially after rubbing. In the center some lesions were slightly scaly. Bits of skin were excised for histologic examination.

REPORTS OF MICROSCOPIC EXAMINATIONS OF SKIN.

The following histologic report of Cases 21 and 22 has been kindly furnished me by Dr. Thos. E. Ely of New York:

CASE 21.—The first specimen consists of several small fragments which show on microscopic examination the following changes:

1. In places where the lesion appears to be slight the only notable change is in an accumulation of small spheroidal and

epithelial cells in the corium about the blood vessels. This change is most pronounced just below the papillary layer in the earliest stages, but soon apparently affects the vessels of the papillæ also. When the papillary layer is affected there is also evidence of edematous infiltration of the tissues surrounding the affected blood vessels, both those of the papillæ and of the deeper portions of the corium, this change being most marked, however, in the papillæ, as a rule. These are the only changes observed in some of the specimens.

2. In others, however, further changes are apparent. In these the changes noted above are present, usually in considerable intensity, the edema sometimes being very marked, but in addition there are changes in the epidermis. Of these the most marked, and probably the initial change, is in the horny layer, and consists of swelling of the cells just external to the lamina granulosa, as if these cells had become infiltrated with a liquid. In consequence of this swelling the horny layer is



Fig. 3.—Typical case of dermatitis hiemalis, second yearly attack at first merely thickened, but even in apparently early stages of this infiltration a tendency to the formation of vesicles is shown by the occurrence here and there of a few small spaces of spheroidal shape and filled with granular material representing serum albumin precipitated in the course of fixation of the specimens.

3. In this stage also there begins to be noticeable a change which later becomes very pronounced, viz., a separation of the cells of the rete Malpighi, so that distinct intercommunicating channels appear between the adjacent cells. This change is seen first in the middle region of the rete where prickly cells are abundant, but extends from there in the more severe cases to the entire thickness of the rete. These channels are believed to have resulted from dilatation of the intercellular spaces. At times they have a width equal to about one-fifth the diameter of the epithelial cells adjacent to them, which under these circumstances seem to have undergone a change in the direction of their long axis. It will be remembered that in the normal skin the cells of the rete become 1 1/2

flattened and consequently elongated in the plane of the skin as they approach the surface. This natural change is observed to be less marked or wholly absent in those parts of the specimens where the intercellular spaces are considerably dilated, and occasionally the cells present their longer diameter even perpendicular to the surface of the skin. The intercellular spaces are for the most part devoid of cellular contents, but even in places where the dilatation is not greatest there are not infrequently a few infiltrating small spheroidal cells to be seen in them. These cells when isolated are for the most part mononuclear, have a small cell body, are very irregular in shape and stain deeply, from which characters they are believed to be mononuclear leucocytes wandering from the deeper layers to the surface.

4. In addition to the change in shape of the cells of the rete above referred to, it is also noticed that the bodies of many of them appear distinctly more granular than normal, and that even in the deeper layers small vacuoles have formed circumferentially about the nuclei. In those places where the changes are all more marked these vacuoles are seen to be much larger, occupying as much as a quarter or half the cell body. They appear in the specimens to be empty, but probably during life had a liquid contents. Occasionally the cell

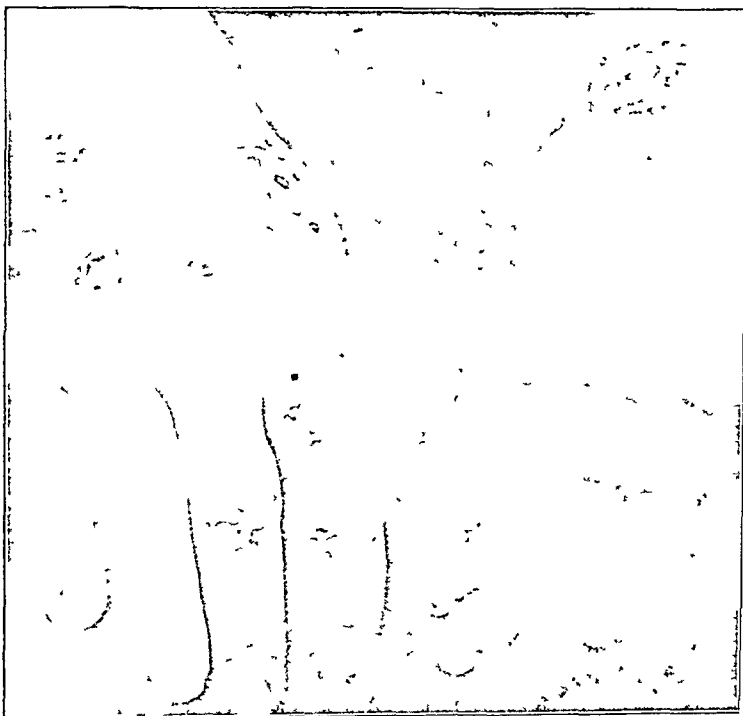


Fig 4—Dermatitis hiemalis, the typical eruption, showing the herpetiform character of some of the lesions. They are usually encountered early in the course of the disease.

appears swollen and its entire contents appear to have given place to one large vacuole.

The changes above detailed represent the fundamental pathologic processes which have been observed, but they are combined in different proportions in different parts of the specimens. They have been presented, so far as possible, in the order in which they are believed to have occurred, and if this be correct, represent the various stages of the process. In those places where the accumulation of liquid is considerable, where the degeneration of the epithelial cells is marked and where their separation is wide, distinct vesicles are formed, often covered by a considerable layer of the epidermis. In some instances the contents of these vesicles seem to have been chiefly liquid, but in not a few occasional leucocytes, now polynuclear for the most part, are visible. The vesicles are formed in some instances in the horny layer and again in the more superficial layers of the rete, so that they can not be said to have any definite localization. In a few places the vesicles appear to have broken, discharging their contents and becoming covered by a crust of dried material.

Summary.—The changes observed in these specimens are those of an inflammatory process characterized chiefly by infiltration of the skin by a liquid exudate. In addition, how-

ever, there is moderate emigration of leucocytes and some growth of connective tissue cells (epithelial cells) about the blood vessels of the corium. As a part of the inflammatory process also there is degeneration and vacuolation of the epithelial cells of the epidermis, this combining with the liquid infiltration to bring about the formation of vesicles.

CASE 22.—The second specimen is a larger piece of skin, with some of the subcutaneous fat, etc., attached. The changes observed in it are in all essentials the same as those described as present in the specimens from the first case, although some of them are more marked in this specimen while others are less.

1. The same accumulation of cells about the blood vessels of the corium, both of the papillary portion and of the deeper parts, is observable. The edematous condition noted in the first specimens is also present, though less marked in this instance.

2. The swelling of the epithelial cells of the horny layer of the epidermis is exceedingly great in this second specimen, and there are frequent large vesicles here. The contents of these vesicles appear to have been serum for the most part, though a few polynuclear leucocytes are also present in most of



Fig 5—Dermatitis hiemalis, showing the appearance of the lesions after many years' duration, thickening of the derma well marked, itching severe.

them, not enough, however, to indicate the presence of "pus." In this specimen it would seem that there had been little if any excoiation of the superficial epithelium, and this suggests that it represents an early stage of the disease.

3. The separation of the cells of the rete Malpighi described in connection with the first specimen is here much less prominent, though discernible in many places. Here, also, an occasional leucocyte may be seen in the dilated channels.

4. The granular and hydropic degeneration of the cells of the rete are also less prominent in this case.

Summary.—It will be evident, then, that there is much similarity in the changes observed in the two cases, but that in the second the swelling of the horny layer is the most pronounced feature, while the edema of the corium and of the rete Malpighi is here less marked. The conclusions adduced from the study of the first case consequently apply to this second case also. The impression gained from the study of the second case is that it represents an earlier stage of the disease.

During the past winter Dr. Edwin Perkins Carter has studied bits of skin taken from Cases 22 and 27. In both instances the character of the skin lesion was typical of the so-called eczema hiemalis as described above; and the histologic examination was made with

a view to determining what, if any, peculiar or characteristic pathologic changes were present. Dr. Carter reports as follows:

CASE 22.—The tissue was secured about the sixth day after the first appearance of any skin lesion, and the changes present were as follows:

The stratum corneum shows everywhere the evidence of excessive exudation, while three large vesicles stand out prominently with but an extremely thin epidermal covering. Under high power the free masses of red blood corpuscles caught on the surface and in the edematous meshes of this layer, testify to the occurrence of real, and to a certain extent of accidental hemorrhage. Here and there a few scattered leucocytes are to be seen. These vesicles are filled with a clear serum and des-



Fig 6—Dermatitis hiemalis, first attack, showing more acute form of inflammation with vesicles, and the distinct elevated margin described in the text.

quamated cells, and contain almost no polymorphonuclear leucocytes. Where they have formed the upper layers of the rete Malpighi have given place to them, with the usual resulting thinning of the rete in these areas. Elsewhere the rete Malpighi shows some slight increase in thickness, and in several areas, as one approaches the corium, there is quite marked evidence of a mild inflammatory reaction, as illustrated by the infiltration of polymorphonuclear leucocytes and the amount of edema present. In many cases the cells in the stratum granulosum are swollen and edematous, taking the stain but poorly, while in others again they remain unaltered. In the reticular layer of the corium, in addition to some slight vascular dilatation, there are here and there scattered foci of polymorphonuclear leucocytic infiltration and edema. No where is there any small round cell infiltration.

CASE 27.—In this case the tissue was secured at an even earlier stage of the disease, and the changes present are of so slight a character as to hardly merit a description. The upper layer of the derma showed no alteration, and the only evidence of any pathologic change was to be found in the slight vascular dilatation present, and in the edema of the upper layers of the rete Malpighi.

¹ Summary.—From the observations made on these two cases there is no evidence that the process differs in any way his-

tologically from an ordinary eczema. The stage of the changes depending, as in any case, on the length of time during which the process has been active, together with the susceptibility of the individual skin affected.

THE AUTHOR'S CONCLUSIONS.

From a careful clinical study I am convinced that the affection is more closely allied to the erythemata than was at first supposed. Not only is the color suggestive of some forms of erythema, being of a dark bluish tint, but like erythema, it more frequently attacks the distal extremities or parts farthest removed from the center of circulation. Again, like the erythematous group, it is more frequently met in the months in which there is the greatest variability in temperature, which prevails most frequently during the early winter and the early spring months. The histologic findings made by Dr. Ely and by Dr. Carter show nothing distinctive, and the extent of changes in the skin seems to be wholly dependent on the amount of circulatory disturbance. That cold may be regarded as a causative factor in the affection seems to me to be well established; that the same influences are causative in the erythematous group is likewise generally accepted. I would therefore regard the disease as one allied to eczema, while characterized by

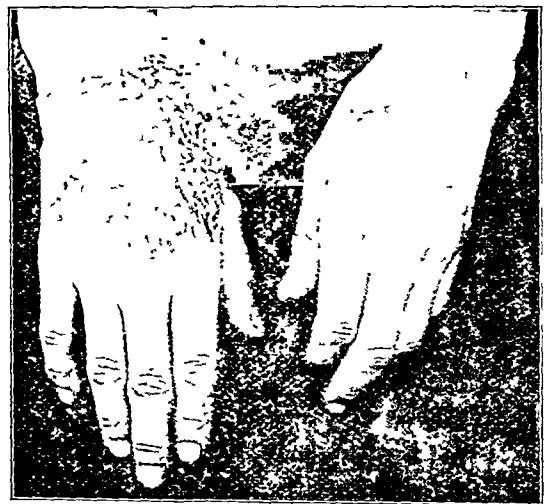


Fig 7—Dermatitis hiemalis of many years' duration, inflammation less active, hypertrophy beginning to take place

some of the clinical features of erythema, presenting a clinical picture quite distinct, which further observation may show is entitled to be looked on as a disease *sui generis*.

Should a distinct name be called for, the most appropriate, it seems to the writer, is the one proposed, dermatitis hiemalis.

TREATMENT.

Little can be said in regard to the treatment of the affection. Thus far the internal administration of ichthyol, as reported in one of my previous communications, apparently was of benefit in one case—the disease having disappeared under its use without the assistance of warm weather. The most benefit, however, has been derived from local measures. The application to be selected naturally depends on the extent of the inflammation, and whether or not we have an excoriated area or a thick and hypertrophied condition of the skin to contend with. In the former condition some slightly astringent, soothing application, such as the glycerid of tannin, diluted with distilled hamamelis (1 to 3), lead wash, or the evaporating lotion of Hutchinson (liquor

plumbi 5ii, spts. rectificati 5iii to aquæ q. s. 5viii). When the disease has become chronic with hypertrophy, salicylic acid grs. xx, ung. diachyli 5ii. In place of the diachylon ointment, mercury or tar may be used in ointment form. In all cases the hands should be protected by wearing leather gloves, and when practicable a change of climate affords the most certain means of immediate relief, although it does not eradicate the tendency to the disease.

DISCUSSION.

DR. W. S. GOTTHEIL, New York—The cases described belong to a class not unknown in the east, though we are accustomed to give them a different name, and do not recognize the relationship to erythema that the essayist ascribes to them. Precisely similar cases in our clinics are called mycotic eczemas; they are recognized as eczematous, and are called mycotic on account of their peculiar margins, course, etc. That they get worse in late autumn and early spring has also been noted.

DR. M. L. HEIDINGSFELD, Cincinnati—I have long been impressed with the frequency with which these cases occur, and with the large rôle they play in dermatologic practice in Cincinnati. I am also impressed with what Dr. Gottheil remarks on, and the clinical manifestations have lead me also to believe that there is some parasitic nature to this affection, though histologic and bacteriologic proof is still lacking. The same predisposing influences which Dr. Corlett mentions exist in Cincinnati. Personally speaking, these cases, in previous years, have proved to be very obstinate and rebellious to therapeutic measures, and during the past year I have found the x-rays to be a very valuable and efficient measure for their treatment. As far as my personal experience permits me to state, I believe that the results from the x-ray are not only prompt, convenient and effective in the treatment of this affection, but also permanent.

DR. M. B. HARTZELL, Philadelphia—I think we have all seen cases of this kind, and it seems to me that what they should be called depends largely on their etiology. I am sure I have seen cases like these which have resulted from external irritants. In some instances the irritant was discoverable, but in most it was unknown. If I understood the writer of the paper correctly, the histology differed from that of eczema. As to whether we shall call this affection dermatitis hiemalis or eczema will depend somewhat on our definitions of dermatitis and eczema. I would deprecate qualifying the disease as mycotic. That seems utterly without reason. No one has ever discovered a micro-organism in these cases, and the presence of a sharp margin is not a sufficient reason for calling them mycotic.

DR. F. H. MONTGOMERY, Chicago—Dr. Corlett has given a very clear demonstration of a fairly distinct local type of a larger class of disorders to which Dr. Hyde called attention some fifteen years ago. By comparing, month by month during a period of three years, the number of cases treated with the temperature chart of the weather bureau, he demonstrated that these conditions were exaggerated and largely due, not so much to cold as to sudden temperature changes; a sudden change from cold to warm weather being effective, though less so than an equally sudden change in the opposite direction. I would like to ask Dr. Corlett whether he has recognized this influence of a sudden change in temperature on the cases which he has described to us.

DR. CORLETT—I am loath even to attempt to add to the already long list of skin diseases, but I have a fixed impression that the cases herein detailed represent a distinct clinical entity, while from a pathologic standpoint no distinct picture may be drawn. As I have said, my observations are based on clinical experience.

In regard to Dr. Montgomery's question, in my paper read in London I gave a table of the climatal changes occurring on the south shore of Lake Erie for a certain period of time, and in that table I called attention to the fact that these dermatoses were apparently dependent on a rapid change in temperature, but that my observations were always on the same altitude.

CONCERNING MORPHIN ADDICTION AND ITS TREATMENT.*

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FLINT, MICH.

Of the last twenty cases of morphin addiction which have come under my observation, eight were physicians, one was the wife of a physician and one the daughter of a physician. Fifty per cent., therefore, occurred among physicians and their families. It is difficult to account for this appalling fact. I have fallen to wondering how much the disposition to test and try had to do with this and how far failure on the part of teachers to emphasize to students the dangers of the morphin habit was responsible for it. In some instances I am regretfully forced to the conclusion that the taking of the narcotic was from pure self-indulgence. In one case in particular, that of a young man who acquired the habit in student days, there was no attempt at self-extenuation or excuses. He did not even justify its first use on the ground of experimentation as to its effects, but admitted dallying with it and forming the habit as one might that of tobacco. His mental organization was cast in the dreamy mold, and I am not at all sure but that previous indulgence in cigarettes to excess had much to do with the subsequent resort to the, to him, more delightful stimulation. In the majority of the eight cases, however, I think it unquestionable that the habit had been acquired because of demand on the part of the system for temporary lifting up after exacting professional duties. No doubt in most of such cases the physician to secure repose and rest from the boneache and nerverack has taken a small hypodermic with a feeling of perfect indifference as to danger. He has been perfectly well aware of the insidiousness of the drug and the danger of the formation of the habit, but has, because of this very assurance, felt there was no likelihood of its obtaining the mastery. It would seem, however, in the light of these facts, that a grave responsibility rests on teachers of therapeutics to instill into the minds of students a wholesome fear of this blasting and deadly narcotic. It is my belief, based on the experience of a good many years, during which I have had many painful neuralgic conditions to treat, that it is used far more than there is any need. It is too frequently the first resort. The physician is apt to follow one dose with another, and another, and when he finds to his distress that his patient is clamorous for the drug and will not hear of its suspension, he realizes, perhaps for the first time, the perils of the situation.

Paradoxical as it may appear, some of the most difficult cases to treat have been those of short duration, and the least difficult those displaying a complication of habits, as liquor and morphin, or cocain and morphin. The latter have frequently borne the abrupt withdrawal or the rapid reduction of the drug with less constitutional disturbance than cases of the morphin habit pure and simple. I have never known a case attended with greater discomfort than that of a young man under twenty-five who had used morphin but three years, and who was taking, as far as could be learned, not more than three or four grains per diem. In this case the nausea and vomiting, cardiac disturbance, pain and nervous manifestations were extreme, and would have been alarming except for the age and strength of the

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Nervous and Mental Diseases, and approved for publication by the Executive Committee: Drs. Frederick Peterson, Richard Dewey and H. A. Tomlinson.

patient. Circumstances were such that the abrupt withdrawal of the drug was imperatively necessary. Whether the symptoms would have been materially modified had some other method of treatment been resorted to, I am in doubt.

On the other hand, the case which presented fewest difficulties in the way of treatment was that of a physician, aged forty-eight, who had used liquor and morphin for thirty years, beginning the employment of morphin for sick headache. Both had been taken in great excess for seven years. He had had one attack of delirium tremens, followed by mental disturbance, which continued for two months. He once reformed under the gold cure, but relapsed. Within the twenty-four hours previous to his admission to Oak Grove he had consumed three pints of whiskey. He took regularly every two hours or thereabouts in the twenty-four hours the following drugs in pill form: Acetanilid, 3 gr.; citrate of caffein, 2 gr.; bicarbonate of soda, 1 gr.; morphin, 3-8 gr.; nitroglycerin, 1-100 gr.; tincture digitalis, 2 drops; tincture strophanthus, 2 drops; strychnin 1-30 gr.

Immediately after admission to Oak Grove he was given a Russian bath and his clothing and effects were carefully examined, a few tablets of morphin being removed. During the evening he complained of acidity of the stomach, which was relieved by the administration of aromatic spirits of ammonium, quinin and sodium bicarbonate. Compound syrup of hypophosphites was prescribed, t. i. d. At bedtime 15 grs. of sulphonal were administered. He passed a comfortable night, sleeping well, remained in bed all the day following admission, dropping asleep before dinner time and sleeping soundly until midafternoon. On waking, the heart's action was sixty-four, but soon rose to seventy-two. He was depressed in spirits, but showed no physical perturbation. Two days later he sat up. It was noted that he felt comfortable. "He complains of no unpleasant symptoms except slight headache and weakness." Three days later the note is made that "his appetite is very much improved and he is gaining in strength. He walks about the grounds and goes driving," and one week later that, "he continues to gain in strength and mental operations are clearer." It is a singular fact also that there is an entry to the effect that constipation has been overcome by the use of cascara and glycerin suppositories. As all will agree, constipation as a symptom following the withdrawal of morphin is most unusual. He was removed from Oak Grove two months following admission.

The experience in this case and in a similar case where the patient had been taking morphin, whiskey and cocain (the withdrawal of all three of which was productive of no constitutional disturbance) would seem to indicate that as a preparation for a course of treatment looking to the withdrawal of morphin, it might be well to prescribe for a period of weeks or months a small allowance of whiskey and cardiac tonics, such as digitalis and strychnin.

As a rule, patients who place themselves voluntarily in the care of a hospital for relief from a drug habit, are deeply imbued with the necessity for this and are desirous, for financial or other reasons, that the habit should be corrected at the earliest possible moment. In such cases where physical strength will permit and one has the full co-operation of the patient and can watch the case for untoward symptoms, it is frequently expedient to discontinue absolutely and at once, opium and all its preparations, substituting strychnin, quinin, kola, coca, champagne, aromatic spirits of ammonium,

according to circumstances and giving hypnotics at night as indicated. In prescribing chloral in such cases, it is well to combine it with quinin or strychnin, and I find that at the height of constitutional disturbance and physical distress the third day after the withdrawal of morphin, a hypodermic of a quarter to a half a grain rests the system, brings about relief from nervous tension and does not interfere with the progress of the case; in other words, treatment may go on as before after the use of the hypodermic.

An interesting case came under observation not long ago, in which the patient had been using the following drugs: Sulphate of strychnia, 1-60 gr. every 4 hours: for a stomach and bowel difficulty, salol and charcoal of each 1½ gr., subnitrate of bismuth, 6 grs., extract of nux vomica, ¼ gr.: for inaction of the kidneys acetate of potash, 12 grs., spirits of nitrous ether, 10 minims, every hour until four doses had been given; of morphin, 26 grs. in 24 hours in divided doses; of paraldehyd, a small teaspoonful every hour. She was also requiring the use of a spray and mouth wash in consequence of salivation from paraldehyd.

In this case paraldehyd was discontinued immediately, the other prescriptions given at longer intervals until discontinued and the morphin rapidly reduced. It was practicable after three weeks to discontinue the use of morphin altogether.

Much has been said and written about the greater fortitude of women than men in bearing suffering, and my experience with morphin habitués bears this out. The most heroic patient I have ever known was a woman who had been taking in the neighborhood of fifteen grains of morphin daily for a number of years. She insisted upon having the drug immediately and totally withdrawn and her wish was complied with. I am satisfied that her sufferings were acute, but she bore them with a stoicism and a restraint of the emotions deserving of all praise. Hardly a groan escaped her. She set her lips and teeth and never gave way to lamentation or outcry. I have often thought that for cool, clear grit this case shone out with unparalleled brilliancy. Her sufferings were over in a week and she recovered rapidly, as she deserved to.

Two cases came to Oak Grove of one of whom it was alleged that there had been used large quantities of liquor and cocain and of the other, cocain and morphin. In the latter case the allegation was admitted as to the past, but it was declared by the patient that he had recently discontinued both. In the former case the use of whiskey was admitted, but that of cocain denied. In neither was anything of a spirituous or narcotic character prescribed after admission and the practical absence of constitutional symptoms seemed to bear out in a measure the contention of the patient. I had a suspicion, however, in at least one of the cases, that extreme strength of will and the determination of the patient to maintain his position against that of those who had been instrumental in placing him under treatment buoyed him up and operated as a strong auto-suggestion to modify the symptoms of constitutional disturbance.

One case was that of a woman of advanced age, 73 years, and was complicated by feeble heart. Notwithstanding the latter condition, rapid reduction of morphin was resorted to and in the end complete recovery occurred, although at one time there were alarming cardiac symptoms. Experience in this case confirms me in the belief that the dangers from abrupt or rapid withdrawal of morphin are somewhat exaggerated. Personally, I have never known fatal results to follow the with-

drawal of morphin except in one case. The case was encountered many years ago while I was connected with the asylum at Pontiac. The patient was a young man in apparently vigorous health who had become so thoroughly disgusted with the slavery to appetite that he determined to be released from bondage at once. He was so fearful that morphin even in small amounts would be given him concealed in other medicines, that he absolutely refused to take medicine of any kind. Three or four days after the withdrawal of the drug, he got up from bed against the advice of the physician and insisted upon being shaved. He complained of feeling ill when in the barber's chair and returned to bed, where he was found a few minutes later, dead. There is no reason to doubt that had this patient taken suitable sustaining remedies and received the nursing attention which was desirable, he would have escaped the sudden heart failure which caused death.

As may be inferred from the foregoing, there is no plan of treatment that I permit to dominate me or tie my hands in any case. As a rule, I prefer the abrupt withdrawal or rapid reduction of the drug for various reasons, chief among which are that by dispensing with it as early as possible, the amount of suffering is limited, and that it is an injustice to the patient to stretch over a period of months something which may be accomplished in as many weeks. I would not, however, minimize the importance of keeping the patient under disciplinary control and observation as long as may be necessary, during which period the nervous system should be built up, and fortified against subsequent temptation, by the use of tonics, calisthenics, good food and diversion.

DISCUSSION.

DR. D. R. BROWER, Chicago—I congratulate the Doctor on his excellent paper and am sorry to have to add my testimony among our profession and their families. I have had a good many just such experiences as he has had. Of course, I know Dr. Burr well enough to know that his judgment is most excellent in his remedial measures and I agree with him that in properly discriminated cases the sudden withdrawal is the best method to pursue, but so far as my clientage is concerned I find very few cases in which I think this can be done. In my early experience with morphin habitués I had several cases of insanity following the rapid withdrawal of the drug. Since then I have been extremely cautious about it. I agree with Dr. Burr as to the rapid but not the immediate withdrawal of the drug. In more recent years I have never had a case in which I thought the immediate withdrawal could be done with any advantage, excepting in the case of a physician's wife, and even then I did not advise it. She did it on her own responsibility. From taking a very large quantity of morphin daily she came to the conclusion that she would stop at once, and stop she did, exhibiting that wonderful heroism already described. Of course, we kept her well sustained with strychnia and other tonics. My personal experience in recent years has been against the immediate withdrawal.

DR. H. A. TOMLINSON, St. Peter, Minn.—I am always reminded, when I listen to the discussion of this subject, of the controversies which accompany the discussion of the treatment of typhoid fever and pneumonia. Plans of treatment, apparently diametrically opposed, are vigorously advocated, and each seems to be successful. So it is with the treatment and management of the victim of the abuse of narcotics. I do not wish to be dogmatic, and am willing to admit that there is no fault to be found with the logic of those who advocate the gradual withdrawal of the drug, in cases of morphin or cocain habituation, but I am doubtful as to the soundness of their premises. It has always seemed to me that the difference was the same as that between poulticing and lancing a boil. Both methods will successfully evacuate the abscess, and the incision by the knife certainly hurts most at the time. Per-

sonally, I have never seen a case of drug habituation where I have not been able to stop the use of the drug immediately; and while there has been sometimes a great deal of depression, and even apparent collapse, yet the result showed that no harm had been done, and the more rapid recovery of the patient proved that the method was the best. It is true that I have always had my cases absolutely under my control; and I have relied largely on hydrotherapeutic measures and active and persistent feeding. I have withdrawn the drug immediately in a case where 60 grains of morphia, 60 grains of cocain and one quart of whisky were taken every 24 hours, without the slightest ill-effect; although there was acute mental suffering during the first 48 hours. While the patient complained bitterly at first, he afterward admitted that the course followed was the best. I have recently had under my care a physician who came to me an absolute wreck physically and insane. He had been taking morphia and alcohol certainly, and other narcotics probably, in increasing doses since 1892; and had frequently been the subject of so-called cures. He was told frankly what method would be pursued, and while he demurred at first, he submitted. This case was, in my experience, phenomenal, because the patient had very little discomfort, slept well after the first night without hypnotics, ate heartily, and within a week was as well as these cases usually are at the end of a month. I would like to call attention to a fact in my experience, in the treatment of these cases. Those people who take both alcohol and morphia seem to recover more rapidly than those who take morphia alone; and not only are the immediate results better, but the permanent recovery seems to be more certain. It is possible that there is some antagonism between these narcotics, or else that in taking both the victim takes less of either one. There is another fact in my experience which I have not heard referred to. In those who have been morphia, and particularly morphia and cocain habitués for more than a year, there seems to be a permanent loss of the capacity to tell the truth; a sort of moral reduction which remains after apparently complete recovery. He seems to become a gratuitous and usually a purposeless liar. I do not know what has been the experience of others in this respect, and it may be that it has been so in my experience because those cases coming under my care have, as a rule, also been insane, at least temporarily. I do not mean to affirm that there are no exceptions to this rule, but only that I have not met them.

DR. J. H. MCBRIDE, Los Angeles, Cal.—The problem of the morphin habitués is not more to stop his taking the drug than to keep him from returning to the use of it. There are certain aphorisms which it is well to observe in curing the patients of the habit. They should never know how much of the medicine the physician is giving them nor when a reduction is made, nor when the last dose is taken. They are morbid and suspicious and if they know what is being done are certain to criticise and make trouble. The morphin taker is a moral cripple because of the habit and I think it leaves a scar from which they rarely recover. The proper place to treat these people is in institutions and it would be better if they could be kept under surveillance for a year until the nervous system regained its normal tone. I have little faith in the permanency of the cure of the morphin habit. In the many years I have dealt with them I have had charge of a large number and I think I could count the permanent cures on my fingers, possibly on my thumbs. They go away apparently cured; but if they have care and hard work, this, with their weakened will power, leads them to return to the habit and so it comes about that their last state is worse than the first.

DR. JOSEPH COLLINS, New York City—I do not know that I quite understand what the reader of the paper means by the sudden withdrawal of morphin, but if he means the withdrawal of it on the day that he begins the treatment of the patient, as I presume he possibly does, I would state that my endeavors to do that have been singularly unfortunate. If he means by the sudden withdrawal of morphin what I mean when I say that the drug should be withdrawn within

the first week or ten days, then that is the plan to which I hold allegiance and the plan which, with few exceptions, I have never had reason to regret. It seems to me that in all the cases, except those in which the morphin habit has been acquired to overcome the asthmatic neurosis, that the drug can be stopped within the first ten days or first fortnight. Dr. Tomlinson says that he has never seen a case in which the drug could not be stopped suddenly. I must infer that he has never had a case in which the habit was acquired through morphin given to control asthma. It is certain that if a man gets a profound asthmatic paroxysm, you are going to give him some morphin at the time, or he is going to die; at least, that has been my experience. I have no difficulty in the treatment of any case of morphin addiction in cutting down the drug to one-half grain per diem, although the patient may have been taking from ten to one hundred and twenty grains per diem before coming under treatment. In some cases this results in suppression of the solid matter in the urine, associated with a condition of the colon, such as membranous colitis, in which, if some morphin is not given for a week or ten days following, the patients do not get well. The only factor in the treatment of the collapse, which occurs at the end of the first week or thereabouts, the time when the morphin is withdrawn completely, which is not spoken of sufficiently in the books and in articles treating of this subject, is the use of the very hot bath. I recall a case that was under treatment two years ago. The morphin had been withdrawn rapidly and the patient had passed into a condition of collapse. It appeared that death was imminent. He was put in a tub of water at a temperature of 120 F. for a few minutes, probably one or two minutes. The results were more striking than from any other stimulant that I have seen. A few repetitions were sufficient to tide him over the condition of collapse. I would be wretchedly unhappy if I believed for a moment that Dr. Tomlinson's conviction regarding the veracity of the cured morphin habitué was general. Morphin habitués, when they really recover, are just as capable of telling the truth as I am or as any other person made in the same model or cast in the image of God. I believe that this idea that the moral sense of morphin habitués is completely perturbed is an absurdity that has been handed down from generation to generation. Some of the best citizens in New York, some of the most brilliant minds in our profession, some of the masterpieces of evolution's handiwork, have recovered from the morphin habit, and they are just as good citizens and just as good pillars of society as those who have never taken morphin. I am very much interested to hear gentlemen connected with institutions talk about the morphin habit. I was particularly interested in reading Dr. Crothers' book, in which he says that patients should be treated in such institutions. But how are we to get them into institutions? You know, Mr. Chairman, and I know, that in our state we can not do any such thing. We can treat a morphin habitué when he comes to us, the same as we can treat a typhoid fever patient when he comes to us. We have no more right to deprive a man of his liberty because he takes morphin or takes cocaine than we have to shut him up because he chews tobacco. I agree with the reader of the paper and with Dr. Tomlinson that the institutions are the best places to treat these patients, but the first thing to do is to get your bird in a cage before you count his feathers. As far as keeping them in an institution is concerned, I think that is a splendid idea, if it could be enforced, which, unfortunately, it can not. We keep them in institutions—if we have been able to persuade them to go—just as long as they want to stay and no longer. That is the reason why we do not permanently cure more morphin patients. What we need at present is legislation empowering the keeping of such persons in institutions until they have recovered.

Dr. A. B. RICHARDSON, Washington, D. C.—I have listened with great pleasure to the Doctor's paper and wish to say that it corroborates my experience in almost every particular, especially in regard to the large number of these cases that we find among physicians and their families. In regard to the withdrawal of the drug, it seems to me that the indications that should guide us are the physical disturbance rather

than the psychic impression or the physical distress as described by the patient. I doubt whether gradual withdrawal of the drug very much diminishes the sum total of the patient's suffering. In the gradual withdrawal his sufferings are extended over the greater length of time throughout which it continues. We all know that as long as a patient is taking any of the drug at all, there will be a certain amount of psychic disturbance, which is not removed until the drug is totally displaced. There is one condition, or rather an interesting fact, in regard to the method of treatment that came to my knowledge a few days ago, and were I to mention the name of the author of this treatment, I am quite sure you would be surprised that a physician of the prominence of this man should advocate such a method of treatment. A physician of Washington called me in consultation to see his wife who had been a victim of the morphin habit for a good many years. I had been consulted in the matter a good many times. He told me that she had been seen by some of her relatives and that a physician in the neighborhood had stated that he had a new cure for the opium habit. She went under the care of this physician, and in two or three weeks the Doctor went over to see his wife and was told that she had entirely recovered; that she had been free from the use of the drug for two weeks, which had been suddenly withdrawn when the treatment began. The husband made inquiry as to the nature of the treatment and found that it was by means of hypodermic injections of hydrobromate of hyoscin. I do not know the size of the dose. In a very few days the patient was attacked with a violent attack of acute mania, and was sent to an institution where she still remains. When she entered the institution she was very much depressed, and in such a condition that the superintendent did not think there was any hope at all, but by careful nursing and careful attention to her heart finally the collapse was overcome and the patient is now gradually improving. It seems to me that in any treatment for the drug habit, we should not use anything that is so depressing as a treatment of this kind. I was very much surprised that this physician, who is an extensive writer on medical subjects, should have conceived this new cure for the drug habit.

Dr. W. J. HERDMAN, Ann Arbor, Mich.—I would not prolong this discussion, except for its extreme importance to us all. A matter of this kind always recalls to my mind the story of the old farmer and his sons who, after a freshet, were trying to rescue some of their sheep which had gotten out of the pasture into the stream, and the old farmer and his sons stood on the bank of the stream, and as each sheep floated down with the current, at great risk and great labor, they would rush in and get it out and bring it to the shore. Suddenly the idea struck them that they had better go further up the stream and discover how the sheep were getting into the stream. They did so and found that the sheep were in the corner of a field where the ground was being washed away and they could not help themselves from falling in. So they simply opened the fence and let the sheep out, thus doing away with the labor of catching them as they came down the stream. Now, Dr. Burr has said that 50 per cent. of all the cases of the drug habit that have come under his observation have been physicians or in physicians' families. That statement has been confirmed by several who have spoken on this subject. The fact of this drug habit is a sad thing and when we consider that such a large percentage of the persons who are thus addicted to the use of such a drug and who become victims of it are persons who are themselves in a position largely to discourage drug taking, then it becomes even sadder. If 50 per cent. of the victims are physicians, then 50 per cent. of those who become habitués are the results of the unwise and injudicious use of such a drug as this in the practice of physicians. As a teacher, I have noticed this disposition for years among the advanced medical students. I do not say that it is a very prevalent habit, but I do say that it is a very common habit among the students, especially when they are approaching examinations. In order to meet the demand on their energies, in order to meet the emergency, students in medicine are very likely to buoy themselves over that particular strain by means of a drug. It is sometimes strychnia,

it is sometimes morphia; at other times it is bromid, at other times it may be cocain, but they are very likely under such a strain to resort to some drug instead of to physiologic, healthful and normal methods of meeting the demand. Now, if a young man goes out into practice with this habit established, and is confronted with the emergency and the demands of the exigency of his practice, he is then much more likely to resort to such methods for himself. In addition I have noticed this tendency in young men going out into practice. They are brought into the presence of pain; naturally their whole desire is to relieve it. If the man who has preceded them has not made a very brilliant record; if it is a case of neuralgia, for instance, or a case of locomotor ataxia that has been somewhat aggravated, that young man desires to do something promptly, something spectacular, and he is very apt to take out of the locker the most powerful drugs that he knows anything about and employ them, forgetting the consequences of the thing, forgetting that he may be doing an injury to the patient that eventually will be a vast deal worse than the present pain, and I believe that this manner of dispensing on the part of these young men, and the teacher of these young men is very largely responsible for many of these conditions. In regard to the teachers of therapeutics, I think it is unfortunate that the teachers of this subject should not have more practice in dealing with patients. So large a percentage of the teachers of therapeutics are laboratory men at the present time, animal experimenters, men who can tell you what a drug will do to the circulation, what its effect will be on the respiration, and yet they have not had that experience in dealing with humanity that brings to their notice the influence of habits. The necessity of cautioning these young people with reference to the ultimate effects of using these drugs indiscriminately is very apparent. I think that the method of teaching at the present time is, to a certain extent, responsible for this result. So grave has this question appeared to me from time to time and the cases that have come to me, and the difficulty of properly handling those that are not in institutions and, as Dr. Collins has said, can not be brought into institutions, that I feel it must appeal to all of us. As Dr. Tomlinson has said, the dealing with these cases under such circumstances is very difficult, and I have not failed in my attempt to impress on the minds of my students how unwise is the indiscriminate use of these powerful drugs. I frequently say to them, "I am engaged in practicing neurology, and perhaps have more occasions to deal with pain and its manifestations than the average general practitioner. I do not make use of probably two grains of morphia in the course of a week on an average, and I am very seldom called into consultation with general practitioners who do not use anywhere from 10 to 15 to 40 to 100 grains of morphia per week. Now, gentlemen, if I, in the class of practice that I am engaged in, can get along with such a small amount of a dangerous drug, certainly it is not necessary to make use of it to the extent that is being done. I accomplish this partly from sedatives, partly from the use of other methods and it is far better, even for the immediate results, than the use of these powerful drugs." Now, the thing that ought to be impressed on our minds is that the preventive means are going to be the most productive of good results and are the ones that we should keep before us in our methods and to which we should direct the attention of our brother practitioners and those who are to take up this work in the future.

DR. BURR, in closing—My principal reason for reading this paper was the apparently growing tendency, as indicated by journal articles, to the treatment of drug addiction by the very, very gradual reduction of the drug; the reduction drawn out over a period of months. This treatment I have never yet found necessity for and my own experience with the disease would contra-indicate it. In reply to Dr. Collins' question, as to what I mean by the abrupt withdrawal of the drug, I mean the withdrawal absolutely of the drug within two or three days. The treatment which he recommends—the withdrawal of the drug within ten days or two weeks—I would call the rapid reduction of the drug. I agree with him that you can reduce the amount during the first two or three days to a very, very small percentage of what the patient has previ-

ously been taking. You can reduce the amount to half a grain or a grain, even where the patient was previously taking very much more. There is in Michigan a law which gives good results, and some patients have been placed under my care in consequence of it. The law permits the placing of a patient who is addicted to any drug habit under guardianship, and then by the consent of a judge of probate court the guardian may place his patient in an institution for treatment for the habit. This law is similar in its operation to those for the commitment of the insane.

I agree with Dr. McBride that it is very important not to take the patient into consultation in regard to matters of treatment. I am in the habit of saying to the patient the moment he comes in: "You must not ask me what I am giving you; you must not ask me how I am treating you; you must not ask me the amount of medicine you are taking, nor what you are taking, because I do not wish to be discourteous. If you do ask any questions I shall be compelled to say that I can not answer. So let us have that understanding in advance, that I can not tell you what you are taking." If I give a hypodermatic, or if I employ medicine in any other way, I am very particular that the patient shall not know the contents of the medicine or the contents of the tablet or the contents of the hypodermatic, whatever it may be. To sum up again, I favor, as a rule, the rapid reduction of the drug in the treatment of these cases.

CHOLERA ABOARD THE U. S. ARMY TRANSPORT SHERMAN.

EXPERIENCES OF THE ARMY SURGEONS IN CHARGE OF THE CHOLERA CASES, SUSPECTS AND CONTACTS DIS-EMBARKE IN JAPAN FOR QUARANTINE: DESCRIPTION OF THE NEW JAPANESE ANTI-TOXIN AND CHOLERA VACCINE.

WILLIAM C. MABRY AND HARRY C. GEMMILL.
CONTRACT SURGEONS, U. S. ARMY.

August 26, at 4:30 p. m., the U. S. Army transport *Sherman* left Manila, P. I., to enter on five days' quarantine at Mariveles Bay preparatory to sailing to San Francisco via Nagasaki, Japan. The *Sherman* arrived at Mariveles at 6 p. m.

During the ensuing night a first-class passenger became ill and on the 29th died of Asiatic cholera. The transport was at once disinfected and held an additional five days in quarantine, when, all danger having passed, September 4, she proceeded on her voyage.

September 7 another case of cholera was discovered, and up to the time of the *Sherman's* arrival at Nagasaki, 5:30 p. m., September 9, three more cholera cases had developed, and of the four soldiers thus affected two had died and been buried at sea.

The Japanese quarantine authorities came aboard at once on the ship entering the bay and removed the two surviving patients (one in a dying condition) to their quarantine hospital and held the transport for disinfection, a process which they subsequently administered most efficiently.

As all these latter cases had developed among the soldier patients who were quartered in an improvised hospital on a lower troop deck, it was patent that for a thorough disinfection of both men and quarters, the men must be moved ashore and placed in an emergency hospital. Through the efforts of Captain Jackson, assistant surgeon of Volunteers, arrangements with the Japanese officers were readily made to do this, and on the morning of September 10 Contract Surgeon William C. Mabry and Harry C. Gemmill, with two acting hospital stewards and ten privates of the hospital corps and ninety-six patients and contacts, with five days' rations and other supplies, were disembarked with

orders to establish and operate such a hospital until the infection of cholera had been eradicated.

On landing, the entire detachment and the buildings to be used for various hospital purposes were thoroughly disinfected and cleansed. By 4 p. m. all this had been accomplished, quarters assigned and the hospital in complete running order, no untoward effects from the exertion and excitement incident to the transfer having resulted.

Of the ninety-six men so transferred four were attendants who had nursed cases of cholera and ninety-two were being sent home for disability as follows: From dysentery, amebic, chronic, 30; other dysentery, sprue and gastroenteric diseases, 32; venereal diseases, rheumatism, tuberculosis, wounds, etc., 30. Of these a number had had cholera in the islands. Considering the class of patients in the hospital it was almost a certainty that the infection had spread more or less. It was therefore no surprise when three new cases developed ashore on the 12th and three more on the 13th of September. All these men had been isolated on the first appearance of suspicious symptoms and were transferred to the cholera hospital as soon as the diagnosis was clear. With these six men, who were infected aboard ship, the infection terminated, and on the 19th, the regular five days' quarantine having elapsed, the remainder of the detachment re-embarked and on the 20th the *Sherman* resumed her interrupted journey to the states, and after another six days of quarantine at Angel Island was permitted to proceed to San Francisco, arriving October 14, after a trip of fifty-one days.*

THE JAPANESE ANTITOXIN AND TOXIN.

In the treatment of cholera the Japanese are using a blood-serum antitoxin and for prophylaxis a toxin or "cholera vaccine." The blood-serum antitoxin is obtained from a horse immunized to the comma bacillus in much the same manner as that practiced in the preparation of the antitoxin of diphtheria. It is also administered to patients in the same manner as that antitoxin and in doses of from ten to seventy-two grams in twenty-four hours, according to the emergency of the case.

The method employed in the preparation of the prophylactic toxin is not that of Haffkine nor are the reactions in any particular nearly so severe. In Haffkine's inoculations the patients are always so severely affected with fever and pain as to require them to take to bed for from six to twenty-four hours, while in the Japanese this severity is unknown. The toxin is prepared as follows: So much of a pure culture of virulent comma bacilli as can be taken up on a platinum wire with a 0.25 cm. loop is added to 1 gm. of a 0.5 per cent. solution of sodium chlorid; after agitation sufficient to thoroughly distribute the bacilli the solution is placed in a hot-water bath at 60 C. for thirty minutes, then enough acidum carbolicum added to produce a 0.5 per cent. solution of that reagent and the resulting preparation injected at once or preserved in corked and sealed blue-glass bottles. An injection of 1 gm. of this toxin is determined in Japanese laboratories by the usual means, to confer after the second day decided protection if not practical immunity for from four to eight weeks,

the symptoms in case of cholera developing being ameliorated and the prognosis made favorable accordingly. A second injection of 2 gms. seven days after the first and a third of 3 gms. after twenty-one days are determined by the same means to confer immunity to cholera for from fifteen to twenty-four months.

Both the antitoxin and cholera vaccine are prepared and standardized in the "Imperial Laboratory" at Tokyo, of which Kitasato is the chief, and are for the use of public officials only, a sufficient supply for private physicians not being available at this time.

The present epidemic of cholera being the first to occur in Japan, and their toxin and antitoxin now used practically for the first time, there are as yet no published statistics to offer with this article. The Japanese expect to publish full data concerning the treatment in this epidemic at its close, probably about March, 1903.

From official information by Doctor Kikuchi, chief of the Nagasaki quarantine medical staff, we cite the following:

In regard to the antitoxin: At this station we have had a series of thirty-one cases of cholera, all of which have been taken from vessels in quarantine and have received the antitoxin injections, with but one fatality.

In approximately seven hundred cases of cholera in Nagasaki and suburbs up to September 15 the mortality has been about 35 per cent., all cases included; very few, however, have died who received treatment by the blood serum administered in reasonable time. (In the Philippines and Manila the mortality is from 70 to 80 per cent.—M.)

We consider that a case of cholera not in extremes will recover under proper administration of the blood serum.

In regard to the prophylactic toxin or cholera vaccine: All the doctors, directors, nurses, attendants and coolies of this station have received two immunizing injections, and although constantly in contact with the disease, no case of cholera has occurred among us.

On the outbreak of cholera in Nagasaki we determined to immunize all the inhabitants of a small town near this station from which we obtain all our coolies. With this purpose in view we proceeded to that town one morning and inoculated a large number, but did not have enough vaccine to conclude. The afternoon of the same day ten cases of cholera broke out there, six among the non-inoculated, all of whom died, and four among the inoculated, of whom two died. After this day no more cases occurred among the inoculated, although the infection spread among those not inoculated and proved very fatal, owing to the fact that the demand for the antitoxin throughout the empire being so great the laboratory at Tokyo could not supply us enough to successfully combat the infection.

RESULTS OF USE OF ANTITOXIN AND TOXIN.

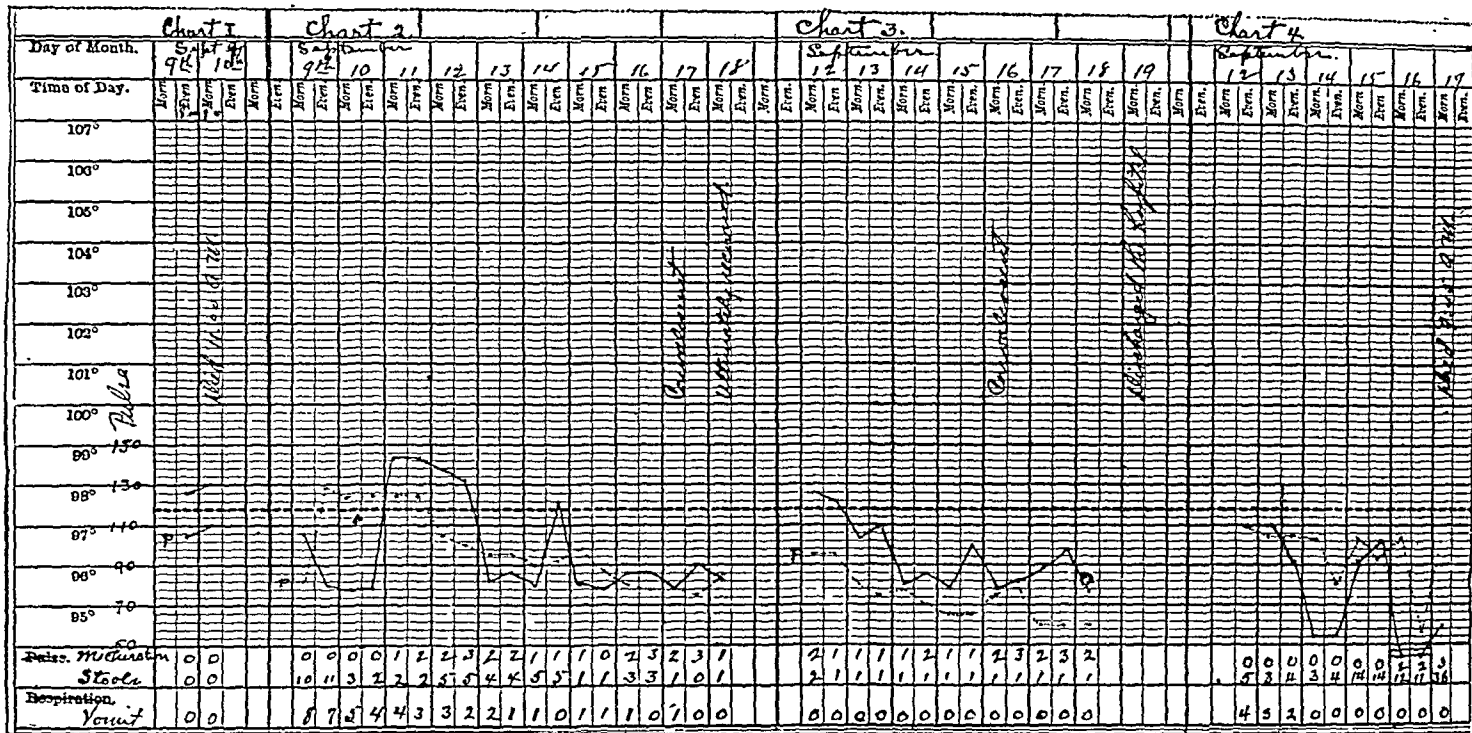
These items of information decided us to use both the antitoxin on the cholera cases as they developed in our hospital and the vaccine for prophylaxis on all available patients. This was done in the station and cholera hospitals without expense to us for material or the services of Japanese surgeons and nurses as required. For therapeutic and clinical data in regard to the eight cholera patients treated with the antitoxin see Charts and Notes 1 to 8 inclusive.

This series of eight cases gives a mortality of 50 per cent. Of the four cases which terminated fatally, all were very sick men whose ultimate recovery was doubtful without the intercurrent attack of cholera. Of the four cases which recovered Cases 2 and 6 were very severe, and would, in our opinion, have resulted fatally but for the treatment with antitoxin. Cases 3 and 5 were diagnosed on the first appearance of symptoms and were apparently aborted by a comparatively small dose of the antitoxin. Marked amelioration of all symptoms followed

* In all, ten cases occurred among the patients and attendants. Of the four aboard, three died, of the six ashore three died. As a matter of interest only we mention that the focus of this infection can not be satisfactorily traced to the case of the cabin passenger who died at Mariveles Bay. It is very probable that a mild undiagnosed case of cholera occurred in the improvised hospital among the chronic dysentery, diarrhea or by relapse or recurrence in an old cholera case, the exacerbation of symptoms in such a case easily escaping detection. The direct means of spreading the infection was probably a drinking cup at the water cooler in the ward.

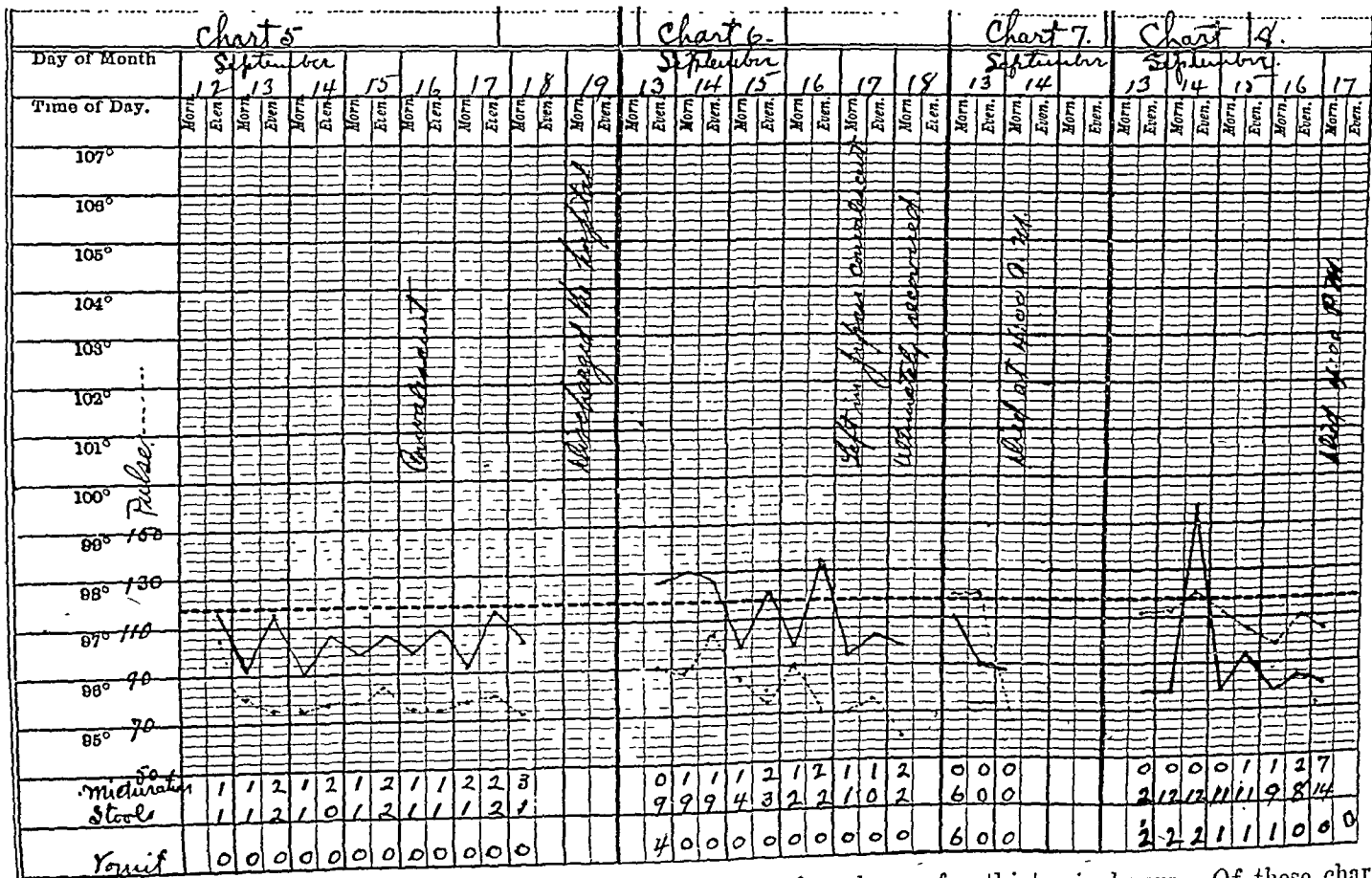
the injections in all of the cases, the effect on the diarrhea, vomiting, aphonia and anuria being marked, in Case 4 the urinary function being restored after four and one-half days' suppression. The comma bacillus was demonstrated in all the cases by both the Japanese doc-

might be intelligently administered, took the injections themselves, Dr. Mabry on the 14th and Dr. Gemmill on the 15th of September. With their experiences as a guide thirty men were selected and given the injection on the 16th and fifty-three more on the 17th, the bal-



tors and ourselves by culture tests and successive examinations after the injections of antitoxin showed marked diminution in the numbers of the bacilli present in the stools of all the patients and a complete disappearance of seventeen men being rejected because of their extreme debility.

In all eighty-five men received the injection, charts being prepared showing temperature and pulse rate



appearance after the second injection in the four cases which recovered.

Concerning the prophylactic injections of the toxin or cholera vaccine: There being no data as to the effect of such injections on Caucasians, and fearing to give it to sick men without it, the surgeons in charge, that it every four hours for thirty-six hours. Of these charts only the extremes of pulse and temperature in uncomplicated cases and the average of all charts are here reproduced with general notes. See Chart 9 A, B and C, and Note 9.

The detachment left Japan previous to the time set

for the second and third injections, and as the continuance of the same was not indicated the Japanese officials were loath to furnish so large a quantity from their limited supply as would have been necessary to continue the inoculations. They presented to us enough vaccine, however, to continue the series in the cases of the two surgeons and their three stewards who volunteered to undergo the experiments.

These injections were given to these five men en route to the United States and charts and notes were carefully prepared in each case. These are here reproduced in full, with an average chart added. (See Charts 10 to 15 inclusive and Notes 10 to 15.)

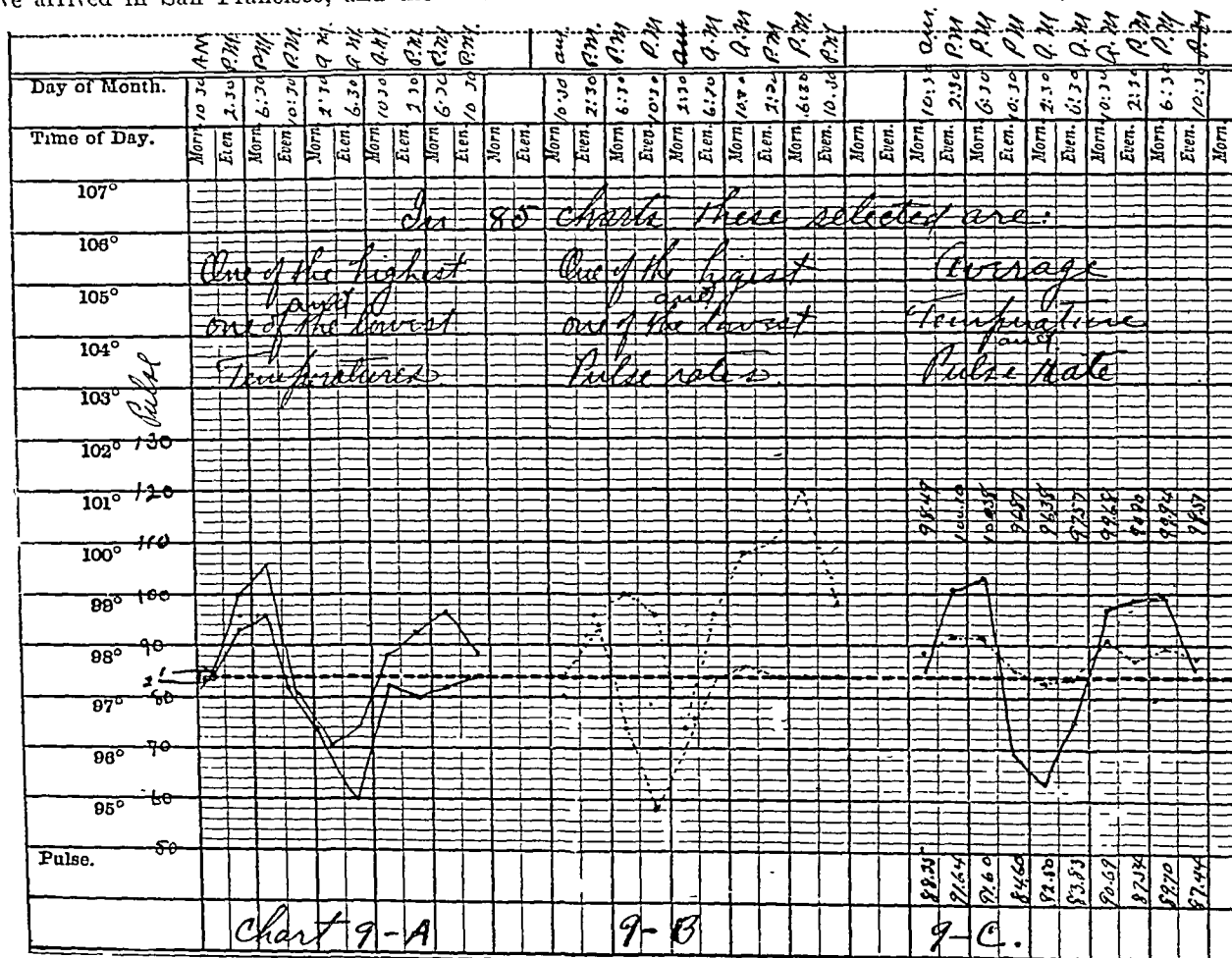
At this date (October 22) no sequelæ have occurred in any case, two of the four convalescents left in Japan have arrived in San Francisco, and the other two are

own Perry who plucked the bandage from her eyes and started her people in an era of unprecedented prosperity.

CHARTS AND NOTES.

CASE 1.—Age 23; diagnosis dysentery, chronic; much emaciated; marked debility; attacked by cholera 10 p. m. September 8; rapidly developed typical collapse of cholera; taken ashore and admitted to cholera hospital 8 p. m. September 9, in dying condition; temperature 98.8 F., pulse 105; marked aphonia and anuria; received 40 gms. antitoxin at 8:30 p. m. At 8 a. m. September 9, temperature 99 F., pulse 110; died 11 a. m., having had no vomiting, defecation or urination since the injection.

CASE 2.—Age 31; physical condition good; diarrhea during night of September 8, 20 stools; isolated aboard ship 6 a. m. September 9; temperature 97.8 F., pulse 82; rice water discharges and vomit during the day, transferred to shore cholera



en route perfectly recovered. In their cases no tumefaction or sequelæ remain and their convalescence has been more rapid than is usually the case. The results obtained by this experience are, of course, very limited, but since cholera has become a live, interesting issue with us, and since the "text-book" methods employed in the islands are so unsatisfactory, anything which promises so much as this antitoxin of cholera should be thoroughly studied.

While it may be a matter of some chagrin that we should be two or more years behind the Japanese investigators who have "in time of peace prepared for war" on cholera, we can not give this progressive new nation too much credit for her achievements, and it should be a matter of pride to us, now that Japan has become a power along all lines and such a close and friendly neighbor to us in the far East, that it was our

hospital 8 p. m.; temperature 96.6 F., pulse 128; received 36 gms. antitoxin 8:30 p.m. the 9th and at 8 a. m. the 10th; patient convalescent September 19; eventually fully recovered.

CASE 3.—Age 24; diagnosis, convalescent after operation for removal of tuberculous cervical glands, physical condition fair; admitted to cholera hospital noon September 12; received 18 gms. antitoxin at 1 p. m.; discharged from hospital September 19, practically recovered.

CASE 4.—Age 46; diagnosis dysentery, amebic, chronic, extreme emaciation and debility, fecal incontinence; admitted to cholera hospital noon September 12; received 20 gms. antitoxin at 2 and 4:30 p. m. the 12th and 2 a. m. the 13th; died at 9:45 a. m. September 17.

CASE 5.—Age 23; physical condition good; admitted to cholera hospital noon September 12; received 18 gms. antitoxin at 1 p. m. the 12th; discharged from hospital, September 19, practically recovered.

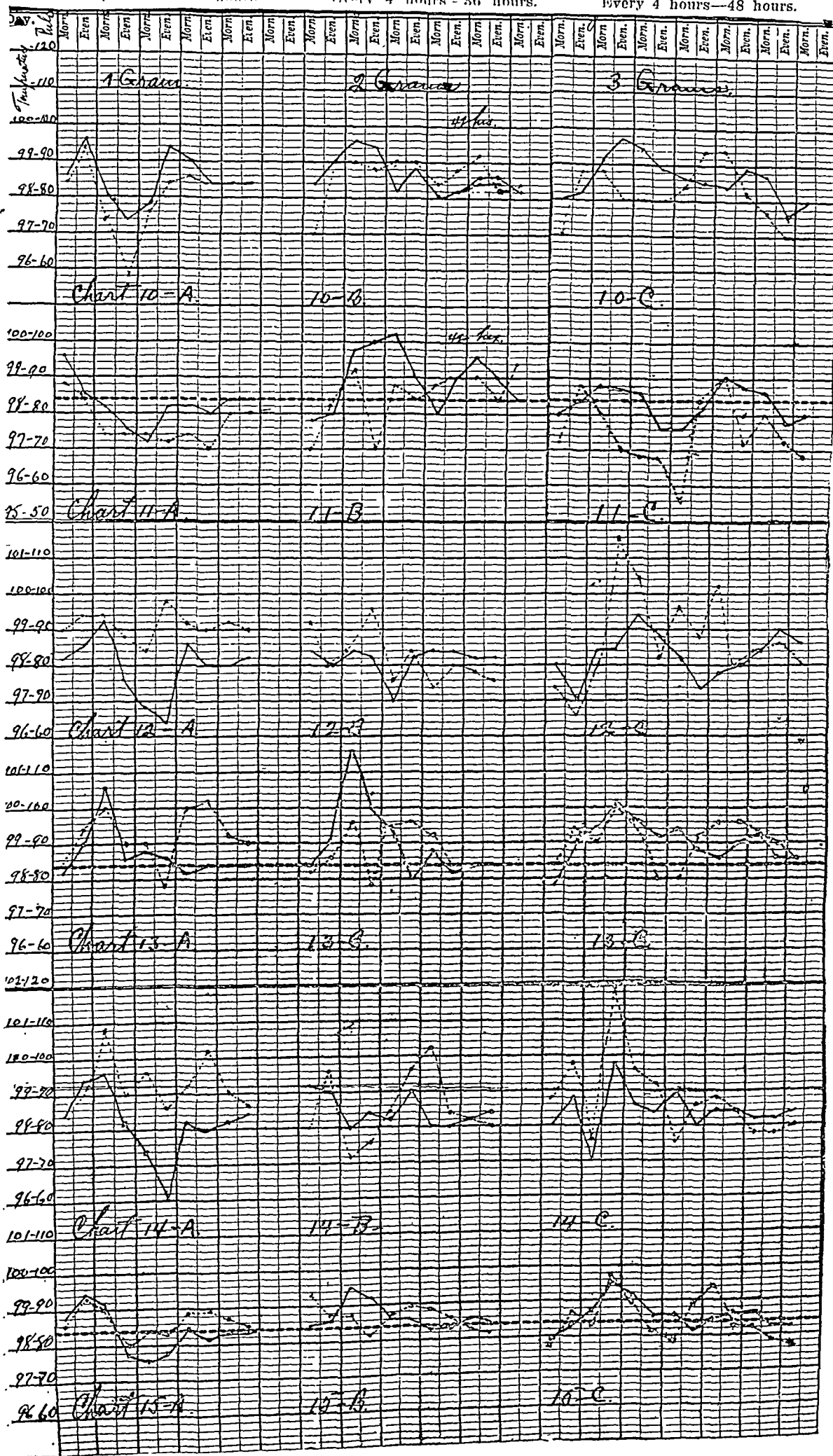
CASE 6.—Age 28; diagnosis enterocolitis, chronic, physical

OBSERVATIONS ON PROPHYLACTIC "CHOLERA VACCINE" (TOXIN) INJECTIONS.

Every 4 hours—36 hours

Every 4 hours - 36 hours.

Every 4 hours—48 hours.



condition poor; admitted to cholera hospital 1 p. m. the 13th; received 30 gms. antitoxin at 6 p. m.; convalescent September 19, eventually fully recovered.

CASE 7.—Age 24; diagnosis gastroenteritis, chronic, extreme emaciation and debility; admitted to cholera hospital 2 p. m. the 13th; temperature 98 F., pulse 120; marked aphonia and anuria, the vomiting and diarrhea had ceased; received 20 gms. antitoxin at 6 and 10 p. m. the 13th; died at 4 a. m. September 14.

CASE 8.—Age 27; diagnosis dysentery, amebic, chronic, extreme emaciation and debility; admitted to cholera hospital 3 p. m. the 13th; received 20 gms. antitoxin at 6 p. m. and 25 gms. at 10 p. m.; died at 4 p. m. September 17.

CHART 9.—On account of detailed charts and notes following (see 10 to 15) this series of eighty-five charts is illustrated by extremes of temperature and pulse rates in uncomplicated cases only, with an average chart of the whole series. For the same reason the symptoms are divided into three groups, i. e., *a*, comprising about two-thirds of the cases; some tenderness and pain with slight tumefaction at point of injection, slight sensation of heaviness in frontal region with slight feeling of general depression. *b*. Comprising about one-fourth the cases; marked tenderness and pain, with more marked tumefaction and some discoloration at point of injection; moderate frontal or basilar headache; slight pain in axillary glands and considerable general depression. *c*. Comprising about one-twelfth the cases; marked tenderness and pain with moderate tumefaction and discoloration about point of injection, slight pain in axillary glands, cramping or pains in muscles of arms and legs, some precordial pain, slight nausea and marked though not serious depression. No temperature fell lower than 96 F., or mounted higher than 101 F. (uncomplicated); no pulse lower than 58 or higher than 120 (uncomplicated); and in no case did a needle abscess develop or were sequelæ of any kind remarked. All injections in this series were of 1 gm., given hypodermatically in the left infrascapular region.

Explanatory Note to Charts 10 to 15.—These charts record observations following prophylactic injections of cholera vaccine or toxin according to the Japanese method, i. e., of 1 gm. hypodermatically in the left infrascapular region, 2 gms. seven days later in the right and 3 gms. after twenty-one days in the left infrascapular region, temperatures and pulse rates being recorded every four hours until the reaction completed—thirty-six hours in the first and second (except two of forty), and forty-eight hours in the third. Temperatures drawn in solid lines, pulse rate in dotted lines. No needle abscess occurred; no tenderness or tumefaction persisted more than ten days, and with most careful observations no sequelæ have been detected.

CHART 10.—Contract Surgeon William C. Mabry, U. S. A. First injection, slight tumefaction and discoloration, marked tenderness and pain about point of injection, dull frontal headache, slightly feverish, slight precordial pain and well-marked depression. Second injection, more tumefaction (about 10 cm. in diameter) and discoloration, more pain and tenderness about point of injection, dull frontal headache, looseness of bowels with some griping, feverish and depressed with slight precordial pain and soreness of muscles. Third injection, slight tumefaction, slight pain, but extended area of tenderness about point of injection, slight frontal headache, supraorbital neuralgia and soreness of eye muscles, soreness of muscles of hands and feet, slight precordial pain, feverish, with loss of appetite.

CHART 11.—Contract Surgeon Harry C. Gemmill, U. S. A. First injection, slight tumefaction, marked tenderness and pain about point of injection, dull frontal headache, slightly feverish and depressed. Second injection, more tumefaction (about 10 cm. in diameter), marked tenderness and pain about point of injection, very feverish with some depression. Third injection, very slight tumefaction, slight pain, but extended area of tenderness about point of injection, dull frontal headache, supraorbital neuralgia with soreness of eye muscles, slight cramping of muscles of hands and feet with marked depression.

CHART 12.—Acting Hospital Steward Ami G. Weyant, U. S. A. First injection, slight tumefaction and discoloration, marked tenderness and pain about point of injection, slightly feverish and depressed. Second injection, more tumefaction

(about 10 cm. in diameter) and discoloration, more pronounced pain and tenderness about point of injection, slightly depressed. Third injection, slight tumefaction, marked pain and extended area of tenderness about point of injection, soreness of muscles with "growing" pains in arms and legs, severe headache, loss of appetite and looseness of bowels, with moderate griping.

CHART 13.—Acting Hospital Steward Wm. W. Arbery, U. S. A. First injection, slight tumefaction and discoloration, marked pain and tenderness about point of injection, soreness of arm and leg muscles, slight pain in axillary glands, decidedly feverish but slight depression. Second injection, more tumefaction and discoloration, severe pain and tenderness about point of injection, decidedly feverish and sleepless. Third injection, slight tumefaction, marked pain and extended area of tenderness about point of injection, dull "growing" pains in arms and legs, dull frontal headache, very feverish and nervous, griping of bowels without looseness, nausea, vomiting once.

CHART 14.—Acting Hospital Steward Fred W. Wengenroth, U. S. A. First injection, slight tumefaction and discoloration, marked pain and tenderness about point of injection, slight soreness of arm muscles, dull frontal headache, slightly feverish, vertigo, precordial pains and marked depression. Second injection, more tumefaction and discoloration, marked pain and tenderness about point of injection, aching of arm and leg muscles, slightly feverish with precordial pains and slight depression. Third injection, very slight tumefaction and discoloration, less marked pain but extended area of tenderness about point of injection, "growing" pains of arms and legs, dull frontal headache, slight depression, looseness of bowels with moderate griping.

CHART 15.—*A, B and C* are average charts of the preceding five sets. It will be noticed that each succeeding reaction is longer than the last and contains some symptom that is more severe. In the second the pain, while in no case approaching that of the Haffkine toxin, is more severe and the fever felt more markedly. In the third the headache, tenderness, bowel symptoms and muscular pain are more pronounced, the tenderness in cases extending over an entire side, but the fever, tumefaction and depression being less than in either of the other injections. In no case of the entire number were the symptoms serious even to the extent of alarming the patient himself and none were so affected as to confine him to his bed.

Unethical Pharmaceutical Houses.—To modern pharmacy we owe much and to pharmaceutical methods we shall owe much more in the future, but the profession has no more insidious foe than the large borderland pharmaceutical houses. No longer an honored messmate, pharmacy in this form threatens to become a huge parasite, eating the vitals of the body medical. We all know only too well the bastard literature which floods the mail, every page of which illustrates the truth of the axiom, the greater the ignorance the greater the dogmatism. Much of it is advertisements of nostrums foisted on the profession by men who trade on the innocent credulity of the regular physician, quite as much as any quack preys on the gullible public. Even the most respectable houses are not free from this sin of arrogance and ignorant dogmatism in their literature. A still more dangerous enemy to the mental virility of the general practitioner is the "drummer" of the drug house. While many of them are good, sensible fellows, there are others, voluble as Cassio, impudent as Autolycus and senseless as Caliban, who will tell you glibly of the virtues of extract of the coecygeal gland in promoting pineal metabolism, and are ready to express the most emphatic opinions on questions about which the greatest masters of our art are doubtful. No class of men with which we have to deal illustrate more fully that greatest of ignorance—the ignorance which is the conceit that a man knows what he does not know; but the enthralment of the practitioner by the manufacturing chemist and the revival of a pseudoscientific polypharmacy, are too large questions to be dealt with at the end of an address.—Osler.

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ANTI-INFECTIOUS ACTION OF CREDE'S COLLARGOL.

We know a number of familiar antiseptic substances that quickly destroy pathogenic bacteria with which they are brought in contact outside the body. From time to time it has been proposed to introduce such antiseptics into the body in order to directly attack general infections, like puerperal septicemia, acute endocarditis and the like. The substances that exercise such prompt bactericidal effect in the test tube might have like action in the living organism harboring infectious organisms. Unfortunately, the conditions in the living body are so infinitely more complex than in the mixtures of the test tube that we long ago learned not to apply the results obtained in the latter to actual infections, and yet the necessity for efficient and otherwise harmless "internal antiseptics" has led to more or less effort to establish by empirical methods the usefulness of certain substances of this class.

Perhaps Credé's colloid silver (collargol) has acquired as much reputation as a safe internal antiseptic as any. It has been introduced into the body by means of inunction of the unguentum Credé, in pill form, and also by means of subcutaneous and intravenous injections. A large number of the most varied forms of infection, local, general and mixed, and human as well as animal, especially equine, have been treated with collargol in some form or other. The results obtained have been contradictory, some praising colloid silver as a specific remedy against sepsis, others denying it all claim to efficacy. It is absolutely a safe statement that collargol has not been able to stand the test of fire applied to it by clinical experience. The apparently brilliant recoveries ascribed to its use are explainable in other ways. All physicians are familiar with the rapid and sudden, apparently spontaneous changes in the clinical picture of various infections; long-continued septic fevers may suddenly show a drop in the temperature that is followed by recovery without the influence of any medicine.

There has been a most noteworthy dearth of accurate experiments with animals in order to establish definitely the real effect of colloid silver on infections, experiments easily so controlled as to exclude the grave sources of error always attaching to clinical work of this kind. This lack of experimental study is supplied in a large measure by the recent investigation of Cohn¹ in Pfeif-

fer's laboratory in Königsberg. The experiments of Cohn are extensive. They include the study of the bactericidal action of collargol in the test tube in watery solution and when mixed with serum; the actual effect on experimental infections with various bacteria, and the study of the tissues and organs of animals injected. Because of the conclusiveness and uniformity of the results only brief recapitulation is necessary: So early as 45 minutes after its introduction into the circulation colloid silver is no longer demonstrable in the blood because it is deposited as demonstrable precipitate in the organs almost immediately after the injection, and this precipitate does not possess any bacterial action in infections. We believe that these experiments settle the fate of collargol as a specific against sepsis. Its history teaches again the important lesson, too often neglected, that accurate experiments carefully controlled will determine many questions more quickly and more decisively than clinical experience.

PROFESSOR LORENZ.

The great notoriety which the daily press has given to a certain case of congenital dislocation of the hip, recently treated by a distinguished foreign surgeon, would lead one to think that the reduction of a dislocated hip of congenital origin was an unknown and unheard of thing before the arrival of Professor Lorenz, and that the learned professor had introduced a new and wonderful principle in surgery to an ignorant and benighted race. One could not blame the ordinary layman for entertaining such views after reading the extravagant and absurd articles that appeared day after day in the daily papers, but the intelligent members of the profession know that the operation has been repeatedly and successfully performed by many surgeons throughout the country. Those of the profession who are at all familiar with the subject are also aware that the so-called bloodless method was not original with Lorenz, although introduced into Germany and popularized by him, and to him is justly due great credit for the improvement in the method which his genius originated and the perfection of technic which he developed.

However, after all has been said for the bloodless method, it is by no means certain that it is the only method, or even the best method in certain cases. As our knowledge of the pathology of congenital dislocation of the hip increases it is found that in certain cases angular deviation of the neck of the femur, twisting of the upper end of the shaft of the bone, relative displacements of the lesser trochanter, etc., are present conditions which can only be remedied by an open operation, and such operations are constantly becoming more frequent at the hands of the surgeon. While it has been clearly demonstrated by Lorenz, Hoffa, Mikulicz, Schede and others that a large percentage of the cases of congenital dislocation of the hip can be improved or functionally corrected by the bloodless method, it has

1. Centralbl. f. Bakt., 1902, xxxii, 732-752 and 804-809.

also been demonstrated by the same men that in a large number of the cases thus operated on an anatomic reduction of the dislocation is not accomplished, but simply a transposition; or, in other words, the case is transformed from an upward and backward dislocation into a forward dislocation, which corrects the lordosis and does away with the peculiar waddling gait.

Nor can the statement that the bloodless method is perfectly safe and harmless be substantiated by the facts. Lorenz himself reported three deaths from chloroform in 360 cases, or one death to 120 cases. This gives a proportion 20 times as great as the average deaths from chloroform in general surgery, and shows what a severe shock the forcible and extensive laceration of the tissues produces. Fractures of the femur and separation of the upper epiphysis have occurred repeatedly, as well as lacerations of the sciatic nerve, producing permanent paralysis, laceration of the vessels, gangrene of the leg, laceration of the perineum, etc. These accidents have occurred in the hands of the most expert. Further details of such accidents may be found in an article by Heusner abstracted elsewhere in this issue of *THE JOURNAL*.¹ Even in the few cases operated on by Lorenz during his stay in Chicago—and they were cases carefully selected from a large amount of material—there was one case of fracture of the femur, one of extensive hematoma and one of complete laceration of the perineum extending from the vagina into the rectum. For the newspaper unsavory notoriety, however, Professor Lorenz should not be blamed. He is, personally a charming character and a gentlemanly scholar, but was unfamiliar with the ways of this country and the ubiquitous and pestiferous newspaper reporter, and should have been better advised. In departing Professor Lorenz will leave behind him many pleasant memories of a genial gentleman and a master, but it is unfortunate that such events as his visit should be seized on by any as an opportunity to cover themselves with reflected glory.

PHYSICIANS AND LABOR ORGANIZATIONS.

In organizing a physicians' protective association in California recently it appears that inquiries were made by some parties as to its possible affiliation with the American Federation of Labor. The following letter, taken from the *Stockton (Cal.) Independent*, explains the status of medical men in relation to that body, and will be taken, we trust, as conclusive enough to prevent any future suggestions of the kind:

WASHINGTON, D. C., Nov. 26, 1902.

Mr. H. M. Alexander, Organizer A. F. of L., Record Building, Stockton, Cal.

Dear Sir and Brother:—Your favor of November 18 at hand, and contents noted. I beg to inform you that it is against the principles of the American Federation of Labor to issue charters to professional men. The only union which is made up of men engaged in different crafts and calling is federal labor, but even in this it is stipulated that only wage earners shall be ad-

mitted, and inasmuch as doctors, lawyers and professional men are not considered wage earners, they are not eligible to membership in local unions in affiliation with the American Federation of Labor. As a rule they are desirous of becoming members only for political reasons, and if they have any other purpose in view such as would be of benefit to organized labor in every instance it has been found that they can be of as much advantage to organized labor outside of its ranks as they can if they are members, and in most instances even more.

With best wishes, I am fraternally yours,

FRANK MORRISON,

Secretary, American Federation of Labor.

We believe that the secretary of the federation is correct as to the usual motives of professional men in desiring to join his body. The professional advantages would certainly be small, if indeed they could be found, and the embarrassments from the connection in other ways most serious. A little thought will readily demonstrate this to any one who is acquainted with the labor movement and its tendencies; the fact needs no illustration. Moreover, as the secretary says, physicians who wish to be of any advantage to organized labor can do more in this way outside than within its ranks.

On the other hand, we can protect ourselves far better and more consistently with the true spirit of our profession in our own organizations. These must necessarily be essentially different in their objects and methods from the modern labor union or federation, and it is well to keep this in mind. There are, it appears, some among us who think the salvation of the profession is in a course that would not elevate us in public estimation, to state it temperately, and would do no one else any adequate good. The average labor organizer is ready to take in everything from cash girls to school teachers, and it is well that his limitations should be thus authoritatively laid down by his own side.

We have no objections to labor organizations in themselves, and do not arrogate to ourselves any intrinsic superiority over any of our fellow men. There are, nevertheless, certain respectable professional and social traditions that it is well to regard, and one of them is that of the distinction between the learned professions and most other occupations. We shall wrong no one if we cultivate an honorable consideration of the dignity of our profession, and this we can do without detracting from or underestimating the special merits of others.

ENEMIES TO PROGRESS.

The Central Iowa Homeopathic Society at a recent session passed unanimously a resolution expressing its dissatisfaction with the Iowa State Board of Medical Examiners on account of its course in complying with the law and examining candidates for license. It also included an expression of its opinion that a diploma should be all that is required. This shows from what quarters we may look for opposition to the present salutary registration laws, and is indirectly a very obvious reflection on the class of material turned out by the doctor-manufactories in which the said society is

1. See p. 1627.

most interested. The special inciting cause of the resolution was a paper read by the Registrar of the College of Homeopathic Medicine of the State University on the "Present Status of Medical Legislation," and the resolutions, as the *Des Moines News* expressed it, suggest the import of his discourse.

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The insurance companies of Germany have determined, after a three years' test, that it costs less to support sanatoria for their tuberculous policy holders than to pay the policies of the large number of those who would die sooner without sanatorium treatment. It has been argued that our American insurance companies should follow the example of the German companies, not as a matter of sentiment nor from charitable motives toward their policy holders, but as a safe and conservative business proposition. Here, however, fewer tuberculous subjects, and even subjects with a tuberculous history, succeed in procuring a life insurance policy, whereas in Germany the law prescribes that every laboring man shall have insurance; consequently, a larger number of undesirable risks must be carried, and hence the greater need for sanatoria. From the business standpoint, the advisability of maintaining sanatoria on the part of insurance companies is not as evident, and may be doubtful. At the same time those who are interested will do well to study the arrangement and the management of these German institutions, for the economic motives that originally prompted their instalment also guarantee the highest practical efficiency at the least possible cost.

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A Nobel prize has been awarded, as we recently mentioned,¹ to Major Ronald Ross, the British army surgeon, for notable achievement in medicine. The Nobel prizes, founded by the Swedish millionaire and philanthropist, Alfred Nobel, are awarded annually for the most notable achievements in medicine, science, literature and the greatest service in behalf of peace in the world. The awards in medicine, science and literature are made by certain learned societies in Stockholm. To determine the recipients of prizes of this kind must always be a matter of great difficulty and discrimination, but we believe that the award of a prize to Dr. Donald Ross will meet with the hearty approval of American physicians and investigators. The results of the brilliant investigations of Ross in the etiology of malaria have established the essential rôle of the mosquito in the spread of this disease, a demonstration of direct practical bearing destined to save more human lives and to prevent more human suffering than lies in human power to correctly estimate. To lay bare the complicated methods employed by the parasites of malaria in order to maintain existence was the basis for the development of preventive measures, the central idea of which is to stop malaria-carrying mosquitoes from biting human beings. Truly no better example of the practical value of investigation can be cited than this.

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1. Editorial, *Lancet*, Nov. 29.

1. THE JOURNAL, November 29, p. 1401, and December 6, p. 1468.

LITERATURE REFERENCES:

An article in a recent medical weekly consisted of four columns of reading matter and two columns of bibliography. Over two hundred authors were quoted from German, French, Italian, Hollandish and Russian sources. Some twenty of the books and periodicals enumerated were found not to be accessible in the libraries of this country. The article was on a hackneyed subject and the literature to be complete should have included several thousand instead of several hundred references. The writer of this particular paper, who probably has no knowledge of any foreign language, manifestly did not consult the list of authors he referred to; the bibliography was either copied or compiled for him by some one else. This is an extreme example of a common abuse. The motive is dishonest. The pretense is altogether false. The borrowed halo of erudition fits badly. References to literature are of value chiefly to the original investigator and not to the casual reader. The former, however, wants the whole literature, and can find the desired information in an index of his specialty. The latter does not care whether Smith in America, or Müller in Germany, in 1856 or 1902, described this, that or the other case. Haphazard bibliographies, therefore, should be omitted. Seldom do they enhance the value of the ordinary article even when they are honestly compiled and accurate as far as they go. When they consist merely of a list of titles that has not been carefully verified and controlled by the author, they are altogether misleading, and hence worse than useless.

THE TOXIC ACTION OF THYROID EXTRACTS.

Thyroid medication has to some extent passed out of the hands of the physician; as an antifat remedy thyroid tablets are extensively and sometimes dangerously utilized by the laity. To the medical profession thyroid extract is well known as a powerful agent, and there are few of us who would not exercise some caution in its prescription for continuous treatment. The general public does not seem to be aware of its evil possibilities, and individuals occasionally suffer serious results from their ignorance. An instance of this is reported by a correspondent of the *British Medical Journal*, Dr. Stuart Tidey of Montreux, Switzerland. A lady, aged 40, died from cardiac failure which could not be traced to any definite cause during her lifetime. After death her husband asked the physician if he could make use of a large collection of drugs which she had been carrying around with her and using without medical advice. They turned out to be some pounds of thyroid tablets, of which she had, it appears, been taking as many as 8 or 10 a day. The original supply had been sent and recommended by a family nurse to reduce weight, and the patient had kept herself amply supplied from that time on, with the result of producing fatal thyroid poisoning. Thyroid extract, as is well known, may produce an enfeebled action of the heart when taken in excess, and in some cases of idiosyncrasy; it can certainly be classed as a dangerous cardiac depressant under certain circumstances, and Dr. Tidey very properly calls attention to the risks of its too popular utiliza-

tion. He says he has ample evidence that it has become a fashionable drug with the public, for various purposes, and often, it is to be feared, is very ignorantly used. He mentions a case where it was sent to one of his patients to be given to her daughter, for the purpose of making her grow taller. We, as physicians, do not know all about the drug, but our estimation of its powers is apparently not equal to that of the laity. The newspaper information in regard to it is, in instances we have seen, so exaggerated with its scareheads that it is not surprising that the ordinary reader has erroneous ideas. As Dr. Tidey suggests, thyroid extract is a good subject for further investigation as to the special dangers of its long-continued use in ignorant hands. It may be that many more cases of fatality from this cause may be revealed.

Medical News.

ILLINOIS.

Cats Carry Contagion.—The board of health of Rockford, believing that cats are largely responsible for the spread of communicable diseases, has issued an order that in all cases where cats have their habitation in homes where scarlet fever, diphtheria or other kindred diseases are present, they must be killed.

Personal.—Dr. Max F. Clausius, formerly of Barrington, late acting assistant surgeon, U. S. Army, has returned from Fort Huachuca, Ariz., located in Palatine, and taken the practice of the late Dr. Maximilian Muffat.—Dr. Charles R. Parke, Bloomington, the dean of the medical fraternity of the city, who is about to move to Louisville, Ky., is to be tendered a banquet by the McLean County Medical Society.

Physician-Superintendent Desirable.—At the last meeting of the Chicago Medical Society, a resolution introduced by Dr. Isaac A. Abt was unanimously adopted to the effect that the society believed it to be to the interests of the administration of the Cook County institutions, Dunning, that a medical officer be in charge there, as by reason of special training and knowledge in medical matters a more satisfactory administration can be obtained under such a man.

Chicago.

Baby-Farm Ordinance.—The ordinance placing all institutions for the custody and care of infants in Chicago under the jurisdiction of the department of health went into effect December 1.

Personal.—Dr. William F. Jacobs has gone to Vienna for a six months' course of study at the university.—Dr. Jacques Loeb was given a dinner by the faculty of the University of Chicago, November 13. He is soon to assume a chair in the University of California.

Diphtheria Prevalent.—In November 356 cases of diphtheria were reported, an increase of 84 cases, as compared with the figures of the corresponding month of 1901. The 29 diphtheria deaths reported for the week ended December 13 is the highest number recorded in any week since that of March 3, 1900.

Senn Hall Dedicated.—The first of the new buildings of Rush Medical College was dedicated to the purposes of clinical instruction, December 17, with exercises in its large amphitheater. Sir William H. Hingston, Montreal, surgeon-in-chief of the Hotel Dieu Hospital and professor of clinical surgery in Laval University, delivered the dedicatory address.

Whooping cough is reported from many parts of the city. This disease, often regarded as trivial, is, at this season of the year, a most serious affliction, because of the great danger from inflammation of the air-passages. The health department bulletin advises precautions, and says 25 per cent. of those under one year of age die if they contract whooping cough.

Smallpox in Suburb a Menace.—Chief Medical Inspector Spaulding says no new cases of smallpox were reported during last week, and adds:

Hammond, Ind., continues to be a menace to Chicago. They have 53 cases of smallpox, only 11 of which are in hospital; the others

most interested. The special inciting cause of the resolution was a paper read by the Registrar of the College of Homeopathic Medicine of the State University on the "Present Status of Medical Legislation," and the resolutions, as the *Des Moines News* expressed it, suggest the import of his discourse.

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lastly in the former chapel of the Charity Hospital. This last-named place was notoriously insufficient, and it was decided to build the present structure, which is situated in the Rue Bonaparte, next to the School of Fine Arts. The amount used in its construction was a little less than \$200,000. The most noticeable parts of the building are a vestibule with busts of celebrated physicians and a painting of Pinel, the celebrated alienist, locking up the irons used for insane patients, a large hall for the special meetings of the academy, with a seating capacity of 110, and which is most artistically decorated in the empire style, different committee rooms, a laboratory and institute for vaccination, special rooms for the library, containing 120,000 volumes. At the meeting held on November 25 the president of the academy, who is chosen every year, Dr. Riche, made a discourse in which he showed the importance of the Academy of Medicine, more especially on account of the new sanitary laws, how such measures as had already been carried out to protect children or to prevent too great a spread of alcoholism were due to the academy. He cited the words of the celebrated philosopher, Descartes: "It is of medicine that one should ask the solution of problems which concern the happiness and grandeur of the human race."

Professor Jaccoud, who is perpetual secretary, as the French put it, made a most eloquent speech, in which he showed how continual the progress of medicine was, and his discourse was very much applauded. The minister of public instruction made a speech also, and the meeting came to an end after the president had conferred the cross of Commander of the Legion of Honor on Professor Jaccoud. There are in all 110 members of the academy, which is divided into the following sections: anatomy and physiology, 10; medicine, 13; surgical pathology, 10; therapeutics and natural history, 10; operative surgery, 7; pathology, 7; obstetrics, 7; public hygiene, legal medicine and medical supervision, 10; veterinary medicine, 5; physics and chemistry, 10; pharmacy, 10, and free associates, 10. There are besides 20 national and 20 foreign associates, 100 national correspondents and 25 foreign correspondents.

Cases of Hereditary Locomotor Ataxia by Babinski.

At a recent meeting of the Medical Society of the Hospitals, Dr. Babinski, physician at the Salpêtrière, described two cases of hereditary locomotor ataxia, and remarked they were more frequent than was generally thought. He presented the two patients to the medical society. One was a young woman 22 years old, having Hutchinson's teeth, and presenting at birth anal ulcerations. For two years she has had lancinating pains, the reflex of the pupils is abolished, and the patellar reflex is weaker on the left side than on the right. The father of this young woman contracted syphilis while her mother was pregnant, and infected her. He suffers himself from locomotor ataxia. Dr. Babinski showed another patient who is fifteen years old. There is no pupillar reaction to light, the patellar reflex is abolished, there are urinary disturbances, lymphocytosis of the medullar liquid, specific choroiditis of the left eye, and symptoms of dementia or meningo-encephalitis. The father of this patient has no knee-jerk; there is Argyll-Robertson's sign and gastric disturbances. This patient was not aware he was suffering from tabes, which his physicians had failed to recognize. Dr. Louques described a family in which the father died of progressive general paralysis, the mother and her two daughters presented symptoms of tabes.

Discussion on the Technic of Gastroenterostomy.

Monprofit of Angiers, Hartmann of Paris, Roux of Lausanne, Pauchet of Amiens, discussed gastroenterostomy at the recent Congress of Surgery. Monprofit has performed gastroenterostomy 101 times. He employed the anterior method of Woelfer 15 times, Von Hacker's posterior method 75 times, and Roux's Y process 13 times. The first he found defective, and of the two others Roux's seemed to be more perfect. This technic takes more time, however, and should be used when the patients are sufficiently strong to stand an operation lasting an hour. Out of 60 operations that Dr. Hartmann has performed for non-cancerous lesions of the stomach, there has been only a general mortality of 16.5 per cent., and since 1900, out of 37 cases there have been only 4 deaths, or 10.5 per cent. Better results are obtained if the patients are sent to the surgeon before they are completely emaciated, and in this respect the patients sent by Dr. Hayem and Dr. Soupault, who have made a special study of stomach troubles, are in much better condition. Hartmann considers it advisable to always make an accurate diagnosis, as he does not consider it necessary to operate on all forms of chronic dyspepsia, and he prefers to use Von Hacker's method rather than

Roux's, as he has never seen any complication arising from what is called a *circulus vitiosus*.

Dr. Roux does not consider that gastroenterostomy suffices in ulceration of the stomach, as cancer may supervene. Excision should be performed in such cases, and contrary to what Hartmann says, profuse hemorrhage commands immediate intervention. Dr. Pauchet, who is a clever young surgeon of Amiens, has performed 33 operations for non-cancerous disease of the stomach, and has had only two deaths. Diagnosis is not so much an indication for operation as the symptoms observed, such as vomiting, hemorrhage, pain, loss of flesh and mechanical disturbances of the stomach. He gives the preference to Roux's method, when the patient is in good condition.

Correspondence.

Malaria in the New Born.

YELLOW PINE, LA., Dec. 13, 1902.

To the Editor:—In THE JOURNAL of July 19, 1902, I noted an editorial, "Malarial Fever in the New-Born." I had in my practice last summer a case in point much clearer than the one you cite. It was as follows:

Mother, white, aged 35, five other children, had had not very severe chills at intervals through the spring and summer. I had not advised quinin because in this woman's case the drug invariably brought on uterine contractions. When called at about 4 p. m., I learned that the patient had had a chill about ten that morning, and one about the same time on each of the two days immediately preceding. Her temperature was then 102. She was in labor. In about an hour she was delivered of an eight-month boy that weighed only four pounds. The little fellow seemed to do very well till he was 40 hours old. At that time he had a light chill, followed by a considerable rise of temperature. This was repeated the next morning. On the third morning he had a hard chill, was very blue for nearly an hour, with extremities very cold. After this chill the temperature in the groin was 103. I then gave quinin in ½-gr. doses till three grains were given before next chill time. I also let the father rub the child well in quinin and lard. The mother also took quinin freely. There was no recurrence of chill or fever in either child or mother. This child I am satisfied was bitten by mosquitoes, but would that account for a chill as early as the second day after birth? W. S. LAWRENCE.

Particulars of a Lawsuit.

CHICAGO, Dec. 11, 1902.

To the Editor:—Referring to the notice in THE JOURNAL, December 6, concerning suit brought against me for damages, allow me to state the facts: During an operation by Dr. Lemke in the year 1898 his patient had a cerebral embolism, followed by a partial hemiplegia. Shortly after that a lawsuit was commenced against Dr. Lemke, and I was included in the suit, on account of the supposed financial relations between Dr. Lemke and myself. I was not present at the time Dr. Lemke operated, and had nothing to do with the case. The case was tried two weeks ago, and when the plaintiff had completed his evidence, and without the presentation of witnesses and without a defense on the part of Dr. Lemke or myself, the judge instructed the jury to return a verdict in favor of the defendants, thus exonerating Dr. Lemke from any blame whatever in the matter.

Very truly yours,

J. B. MURPHY.

Book Notices.

DYNAMIC ASPECTS OF NUTRITION AND HEREDITY. By Frank Hordge. Cloth. Pp. 175. Price, \$1.50 net. New York: Wm. Wood & Co. 1902.

The subject of this volume is such a complex and abstruse one that any criticism of a sensible and philosophic handling of it would seem to be almost impossible. The author has undoubtedly given considerable thought to the subject and has brought out his views in a readable form. It is a work that is certainly worth reading, whether one agrees with the author's reasoning or not. The book lacks an index, which is a defect notwithstanding its very moderate size.

THE AMERICAN TEXT-BOOK OF OBSTETRICS. In Two Volumes. Edited by Richard C. Norris, M.D.; Art Editor, Robert L. Dickinson, M.D. Second Edition, Thoroughly Revised and Enlarged. Vols. I and II. Cloth. 1-p. 547 and 554 Respectively. Colored and Half-tone Plates. Price, Per Set, \$7.00. Philadelphia and London: W. B. Saunders & Co. 1902.

The editor of this excellent work has taken the opportunity of a new edition to have several chapters rewritten. At first thought one would not suppose that a text-book on obstetrics would have to be rewritten every few years to keep up with the times, but such is a fact as regards certain parts. The progress made from researches in chemicobiology, in bacteriology, etc., affects obstetrics almost as much as any other department of medicine. Many of the chapters have been rewritten, so that the work is up to date in every particular. It is fully and beautifully illustrated, and nothing has been omitted that would add to its value as a practical work on obstetrics. The only criticism we feel like making is in regard to its form. We can see no reason for such a book being issued in two volumes. It is not so large but it could be very easily handled in a single book.

A TREATISE ON MASSAGE. Its History, Mode of Application and Effects. Indications and Contraindications. By Douglas Graham, M.D., of Boston. Member of the American Association for the Advancement of Science. Third Edition, Revised, Enlarged and Illustrated. Cloth. Pp. 462. Price, \$4.00. Philadelphia and London: J. B. Lippincott Co. 1902.

The author says in his preface, which is in other respects modest, that the reviewer who thinks that he may weigh in it to save himself the trouble of reading the will be very much mistaken. This is a general truth—e of this work as of many others. In this third edition changes and alterations have been made, and the many additions include entirely new chapters on some subjects. In most respects the work is well brought up to date. The semi-popular style is noticeable even more perhaps than in former editions. The author's practice of heading each chapter with a quotation, sometimes duly credited, is uncommon in scientific medicine. The work will undoubtedly hold its own among the popular treatises on this subject.

LECTURE ON OBSTETRICS. By a Regular Physician. Cloth. Dallas, Tex.: Published by Dr. B. E. Hadra.

This is full of excellent advice addressed in a simple and its circulation among the laity would be of advantage in many respects. We wish, however, that the author had brought it out in a little better form and had been more careful in his proof-reading and had exercised more regard for grammatical construction.

Marriages.

SAMUEL BEEKMAN ALISON, M.D., Carlowville, Ala., to Miss Emma Knox Lide of Montgomery, Ala., November 27.

WILLIAM ALEXANDER GRAHAM, M.D., Durham, N. C., to Miss Anne Cameron Shepard of Edenton, N. C., December 3.

ALDEN ARTHUR KNIPE, M.D., Iowa City, Iowa, to Mrs. Emily Benson Kennedy of Philadelphia, in New York City, November 29.

Deaths.

Henry C. Pearce, M.D. Starling Medical College, Columbus, Ohio, 1863, for five years lecturer on physiology and histology in that institution; one of the founders, and for 27 years an honored member of the faculty of Columbus Medical College, and for more than thirty-five years surgeon of the Pennsylvania lines, died from paralysis at his home in Urbana, Ohio, December 2, aged 69. At a meeting of the physicians of the city, December 3, a committee was appointed to draft resolutions of respect and regret, and it was decided to attend the funeral in a body.

Joseph C. Stone, M.D. St. Louis and Missouri Medical College, 1854, a veteran of the Crimean and of the Civil War, an honored member of the profession, and a member of Congress in 1876, died suddenly at his home in Burlington, Iowa, from heart disease, December 3, aged 73. At a meeting of his colleagues in the Des Moines County Medical Society it was resolved to attend the funeral in a body. Resolutions expressive of their sorrow and respect were also adopted.

Nathan Y. Leet, M.D. University of Pennsylvania, Philadelphia, 1852, a surgeon in the Union Army during the Civil War, and for a number of years surgeon-in-chief to Moses Taylor Hospital, Scranton, died at his home in that city from nervous exhaustion, December 6, after an illness of one month, aged 72.

John M. Krim, M.D. University of Louisville, 1869, president of the Louisville Clinical Society, who had a large practice among the German population of Louisville, died suddenly at his residence in that city, December 10, from angina pectoris, aged 60. The Louisville Clinical Society acted as escort at the funeral.

George D. Blomer, Jr., M.D. Jefferson Medical College, Philadelphia, 1890, a member of the Philadelphia County Medical Society and of the South Philadelphia Medical Society, died suddenly, December 1, from hemorrhage of the lungs, at his home in Philadelphia, aged 38.

Martin B. Billingslea, M.D. University of Maryland School of Medicine, Baltimore, 1874, a member of the American Medical Association, died at his residence in Baltimore, December 9, from sepsis and exhaustion following the removal of a carcinoma, aged 54.

Daniel P. Pease, M.D. Bellevue Hospital Medical College, New York, 1882, house physician for several New York hotels, died in Paris, from typhoid fever, December 7, aged 45.

Judson H. Booker, M.D. College of Physicians and Surgeons, Baltimore, 1879, died at his home in Lottsburg, Va., December 1, after a brief illness, aged 46.

Alonzo W. Daum, M.D. Medical College of Indiana, Indianapolis, 1894, died at his home in Connersville, Ind., from stomach trouble, December 3, aged 34.

Robert E. L. Kincaid, M.D. University of Tennessee, Nashville, 1888, died at his home in Bonham, Texas, December 7, after an illness of only five days.

J. Adelard Bazin, M.D. Ecole de Medecine et de Chirurgie, Montreal, 1864, died suddenly at his home in Haverhill, Mass., from acute gastritis, aged 63.

Harlow J. Phelps, M.D. Marion-Sims College of Medicine, St. Louis, 1899, died at Phenix, Ariz., from hemorrhage, November 25, aged 28.

N. W. Bishop, M.D., died suddenly at his home in Loveland, Ohio, November 19. He was one of the oldest practitioners in Clermont County.

James Windsor Fraser, M.D. University of Pennsylvania, Philadelphia, 1884, died at his residence in Philadelphia, November 27.

Louis E. Krombein, M.D. University of Buffalo, N. Y., 1860, died suddenly at his home in Buffalo, December 7, aged 76.

Robert P. Sweatt, M.D. Galveston (Texas) Medical College, 1873, died recently at his home in Waxahachie, Texas, aged 72.

Samuel K. Crawford, M.D. University of Michigan, Ann Arbor, 1861, died at his home in Chicago, December 1, aged 67.

Henry G. Crump, M.D., died at his home in Pell City, Ala., November 26, from accidental poisoning by chloral hydrate.

Frank L. Hinsdale, M.D. Rush Medical College, Chicago, 1881, of Mill Creek, Utah, died suddenly at Scofield, Utah.

Deaths Abroad.

George Caldwell Stephen, M.D., C.M., McGill University, Montreal, 1887, who afterward went to London and obtained the degrees of L.R.C.P. and L.S.A., in 1889, and that of D.P.H. in 1894, and since that time practiced in London, died at his home in that city, recently.

Dr. W. Rager of Copenhagen, a well-known specialist and writer on orthopedics.—**Dr. N. Feuer**, ex-professor of ophthalmology at Budapest.—**Dr. F. Occhini**, ex-professor of operative medicine at Rome.

State Boards of Registration.

Illinois Examination.—**Dr. J. A. Egan**, secretary of the Illinois State Board of Health, reports the examination held at Chicago, October 15 to 17, as follows: Written examination; number of subjects, 11; questions, 110; percentage required to pass, 75; number examined, 62; passed, 54; failed, 5; withdrew, 3.

Candl. Sch. of date. Pract.	PASSED.	Year Grad.	Per Cent.
1491 R.	Rush Medical College, Chicago.....	1902	82
1492 R.	Rush Medical College, Chicago.....	1902	89
1494 R.	Rush Medical College, Chicago.....	1902	83
1496 R.	Rush Medical College, Chicago.....	1902	83
1500 R.	Rush Medical College, Chicago.....	1902	82
1502 R.	Rush Medical College, Chicago.....	1902	93
1507 R.	Rush Medical College, Chicago.....	1902	85
1511 R.	Rush Medical College, Chicago.....	1902	80
1522 R.	Rush Medical College, Chicago.....	1901	86
1532 R.	Rush Medical College, Chicago.....	1895	87
1534 R.	Rush Medical College, Chicago.....	1900	85
1537 R.	Rush Medical College, Chicago.....	1902	90
1540 R.	Rush Medical College, Chicago.....	1902	85
1546 R.	Rush Medical College, Chicago.....	1902	92
1495 R.	Keokuk (Iowa) Medical College.....	1902	84
1549 R.	Keokuk (Iowa) Medical College.....	1902	82
1497 R.	Washington University, St. Louis.....	1899	87
1498 R.	Medical College of Indiana.....	1897	80
1499 R.	Northwestern University, Chicago.....	1902	88
1510 R.	Northwestern University, Chicago.....	1902	80
1501 R.	Illinois Medical College, Chicago.....	1902	81
1503 R.	Illinois Medical College, Chicago.....	1902	77
1516 R.	Illinois Medical College, Chicago.....	1902	82
1517 R.	Illinois Medical College, Chicago.....	1902	80
1505 R.	Harvey Medical College, Chicago.....	1902	84
1506 R.	College of Phys. and Surgs., Chicago....	1887	90
1520 R.	College of Phys. and Surgs., Chicago....	1902	81

Candl. Sch. of date. Pract.	College.	Year Grad.	Per Cent.
1526 R.	College of Phys. and Surgs., Chicago..	1901	82
1529 R.	College of Phys. and Surgs., Chicago..	1902	90
1530 R.	College of Phys. and Surgs., Chicago..	1902	81
1548 R.	College of Phys. and Surgs., Chicago..	1902	88
1550 R.	College of Phys. and Surgs., Chicago..	1902	83
1508 E.	National Medical University, Chicago..	1902	84
1521 R.	College of Phys. and Surgs., Baltimore.	1892	82
1541 R.	College of Phys. and Surgs., Baltimore.	1902	78
1513 E.		1902	86
1509 R.	 al College	1901	86
1510 R.	 umbus...	1898	77
1512 R.	 Russia..	1897	85
1518 H.	Hahnemann Medical College, Chicago..	1899	83
1542 H.	Hahnemann Medical College, Chicago..	1902	83
1523 E.	Eclectic Medical Institute, Cincinnati.	1902	81
1524 R.	Detroit College of Medicine.....	1900	80
1525 R.	Jefferson Medical College, Philadelphia	1900	81
1527 R.	Amer. Med. Missionary Coll., Chicago..	1902	83
1528 R.	Amer. Med. Missionary Coll., Chicago..	1902	85
1515 R.	Amer. Med. Missionary Coll., Chicago..	1901	85
1531 R.	Creighton Medical College, Omaha....	1901	85
1533 R.	Milwaukee Medical College.....	1902	88
1538 R.	Johns Hopkins University.....	1901	86
1539 R.	University of Toronto.....	1895	86
1543 R.	Western Reserve University.....	1902	82
1545 E.	Bennett Medical College.....	1900	78
1551 R.	Miami Medical College.....	1900	84

FAILED.

1493 R.	College of Phys. and Surgs., Chicago..	1902	61
1504 H.	Hahnemann Medical College, Chicago..	1899	72
1514 R.	Barnes Medical College, St. Louis.....	1902	64
1535 P.-M.	College of Med. and Surg., Chicago....	1902	73
1536 R.	Illinois Medical College, Chicago.....	1900	59

WITHDREW FROM EXAMINATION.

1528½ R.	Keokuk (Iowa) Medical College.....	1902	..
1544 R.	Illinois Medical College, Chicago.....	1903	..
1547 H.	Hahnemann Medical College, Chicago..	1902	..

Iowa Report.—The Iowa State Board of Medical Examiners, reports, by **Dr. J. F. Kennedy**, secretary, the examination held at Des Moines, in October: Number of subjects examined in, 8; total questions, 80; percentage required to pass, 75; written examination; total number examined, 30; passed, 23; failed, 7.

PASSED.

Candl. Sch. of date. Pract.	College.	Year Grad.	Per Cent.
776 E.	American Med. Coll., St. Louis.....	1896	76.0
703 H.	Chicago Hom. Medical College.....	1902	80.0
741 R.	College of Phys. and Surgs., Chicago..	1902	80.0
742 R.	College of Phys. and Surgs., Chicago..	1902	78.0
744 R.	College of Phys. and Surgs., Chicago..	1902	75.0
751 R.	College of Phys. and Surgs., Chicago..	1902	80.0
760 R.	College of Phys. and Surgs., Chicago..	1901	85.0
761 R.	College of Phys. and Surgs., Chicago..	1902	93.0
756 R.	College of P. and S., New York City..	1870	81.0
733 R.	Detroit College of Medicine.....	1902	75.0
759 R.	Jefferson Medical College, Phila....	1902	81.0
740 R.	Creighton Medical College, Omaha....	1902	84.0
745 R.	Keokuk Medical College, Iowa.....	1902	76.0
746 R.	Medical College of Ohio, Cincinnati.	1882	87.0
747 R.	Rush Medical College.....	1902	86.0
748 R.	Rush Medical College.....	1902	92.0
749 R.	Rush Medical College.....	1902	85.0
755 R.	Rush Medical College.....	1901	87.0
757 R.	Rush Medical College.....	1900	90.0
758 R.	Rush Medical College.....	1902	87.0
762 R.	Rush Medical College.....	1902	90.0
754 R.	St. Louis Medical College.....	1902	78.0
752 R.	Woman's Medical College, Phila....	1901	86.0

FAILED.

767 O.	American School of Osteopathy.....	1901	42.0
168 O.	American School of Osteopathy.....	1901	57.0
750 R.	Barnes Medical College, St. Louis....	1900	67.0
764 H.	Dunham Medical College, Chicago....	1901	70.0
769 R.	Meharry Med. Coll., Nashville.....	1895	73.0
765 P.	Physiomed. Coll. of Ind., Indianapolis	1878	69.0
743 R.	St. Louis College of Phys. and Surgs.	1901	69.0

Medical Organization.

The Work Before Us.

The *St. Paul Medical Journal* has the following clear editorial on this important subject:

"The coming year will be a most important one for the medical profession of the United States, and we of Minnesota must see to it that our share of the responsibility is not neglected and that the duty which we owe to the rest of the profession of the country is properly performed.

"The Minnesota State Medical Society, at its annual meeting in June, adopted the general plan of reorganization, without a dissenting voice, and thus took the first-step, but the real work is still to come. The county societies must work out the details, and where there are no county societies such must be organized. Some of the county societies have hitherto had little more than a nominal existence, and these must be strengthened, and every

man who is eligible to membership must be personally solicited to join. In some of the more thinly-settled portions of the state it will be necessary for two or more adjacent counties to unite, and where possible a hyphenated name combining the names of the counties should be selected. One thing must be carefully borne in mind by those who take up this work—personalities must not be considered as among the qualifications for membership in the county society. Since admission to the state society, as well as admission to the American Medical Association, can only be obtained through membership in the county organization, such membership is a right which every regular practitioner of non-sectarian medicine can demand, unless good cause can be shown why he is not entitled to it. Grossly unprofessional conduct should be the only ground for exclusion.

"A man who does not belong to his county society must belong to one of two classes: either he is one of those who has voluntarily decided to isolate himself from his fellow practitioners and prefers to lead a selfish, solitary existence, or else he must be considered to be under a cloud on account of his professional misdeeds and unfit for association with his professional neighbors. According to our way of looking at it, the best and fairest plan is to admit to the county society even those who are suspected of being a little loose in their professional conduct, unless their sins have been very open and very flagrant, and by example and influence show them the error of their ways. In this way many a man who is perhaps just on the border line of professional misconduct may be saved and kept straight, who would otherwise go entirely wrong. If, after a few months, it becomes evident that a mistake has been made and that the individual in question is openly violating the rules of professional conduct, it will be an easy matter to prefer charges against him and have him expelled in proper form. He can not then claim that he erred through ignorance or that he was not given a chance. If every county does its duty in this matter, we should have a membership of between twelve and fifteen hundred in the state medical society when it comes together next June; and if every state does the same thing we may expect that the membership of the American Medical Association will jump from eleven thousand to fifty thousand in a single year. It is surely unnecessary to dwell upon the advantages which would result from this complete federation of the American medical profession; they must be apparent to all who will give the matter any thought.

"Let us all join hands and work together for the good of all."

Maury County (Tenn.) Medical Society.

Pursuant to a call of Dr. G. Chris Savage, Nashville, chairman of the committee on organization of the Medical Society of the State of Tennessee, a number of physicians of Maury County assembled in Columbia, December 1, for the purpose of organizing a county medical society. Dr. Hazle Padgett was unanimously chosen temporary chairman and Dr. Otey J. Porter, secretary, both of Columbia. A committee was appointed, consisting of Drs. William B. Harrison, Robert Pillow and Charles A. F. Forgey, all of Columbia, to draft a constitution and by-laws for the society, to report December 15.

Chippewa County (Mich.) Medical Society.

Dr. Beverly D. Harison presided over the meeting of this society in Sault Ste. Marie, December 5, at which organization was effected. Dr. Theodore A. Felch, Ishpeming, councilor for the state medical society, was present and explained the plan of organization, which proposes to include Luce and Mackinac counties. The following temporary officers were elected to serve until the regular election to be held in Sault Ste. Marie, January 1: President, Dr. John R. Bailey, Mackinac Island; vice-president, Dr. Charles J. Ennis, Sault Ste. Marie; secretary, Dr. W. G. Rice, Sault Ste. Marie, and treasurer, Dr. Alexander MacDonald, Sault Ste. Marie.

Butler County (Ohio) Medical Society.

This society met in Hamilton, December 3, for the purpose of passing on the constitution and by-laws suggested for county societies by the American Medical Association. The report of the committee was made and the constitution and by-laws

adopted. Dr. Brooks F. Beebe, Cincinnati, the councilor for the district, was present and explained the new plan of organization. The following officers were elected: Dr. Thomas A. Dickey, Middletown, president; Drs. R. Harvey Cook, Oxford, James Macready, Monroe, and August Schumacher, Hamilton, vice-presidents; Dr. John A. Grafft, Hamilton, secretary, and Dr. James E. Torrence, Hamilton, treasurer.

Monongalia County (W. Va.) Medical Society.

Acting on the recommendation of the West Virginia State Medical Association in regard to the formation of county societies, physicians of Monongalia County met in Morgantown, November 18, and effected a temporary organization, with Dr. William M. Sivey, temporary chairman, and Dr. Richard H. Edmundson, secretary, both of Morgantown. The by-laws of the state medical association governing county societies were read and a permanent organization formed. Dr. Spencer S. Wade was elected president; Dr. William M. Sivey, secretary, and Dr. Haught, treasurer. Drs. Brock, Haught and Sivey were constituted a committee on constitution and by-laws, to report December 2.

Manila Medical Society.

We have been favored by Dr. Richard P. Strong, secretary, with a copy of the "Constitution and By-laws of the Manila Medical Society," just organized. The constitution provides for active, associate and honorary members, and guests. Meetings are to be held monthly. Most of the principles contained in the constitutions and by-laws for state and county societies, prepared by the Committee on Organization of the American Medical Association, are included. Five councilors are provided for, each to serve five years. The functions of the council are, in part, those of a board of censors for county societies, and, in part, those of the council and house of delegates for state societies. It asks to be affiliated with the American Medical Association.

Societies.

COMING MEETING.

Western Surgical and Gynecological Association, St. Joseph, Mo., Dec. 29 and 30, 1902.

North Dakota State Medical Society.—The annual meeting of the society will be held at Bismarck, May 21 and 22, 1903.

Greene County (Ohio) Medical Society.—Dr. Thaddeus A. Reamy, Cincinnati, was the guest of this society at its regular meeting held in Xenia, December 4, and delivered an address on "The Treatment of Abortion."

Calhoun County (Mich.) Medical Society.—The twenty-sixth annual meeting of this society was held at Marshall, December 9. Dr. Louis S. Joy, Marshall, was elected president; Dr. James H. Reed, Battle Creek, vice-president, and Dr. William H. Haughey, Battle Creek, secretary and treasurer.

New York Neurological Society.—The following officers have been elected: President, Dr. Pearce Bailey; vice-presidents, Drs. J. Arthur Booth and Frederick Peterson; recording secretary, Dr. Bronislaus Onuf; corresponding secretary, Dr. Frank K. Hallock, and treasurer, Dr. Graeme M. Hammond.

Northwest Arkansas Medical Society.—This society held its annual meeting at Springdale, December 2. An effort is being made to reorganize this society as "The Medical Society of the Tenth Judicial District of the State of Arkansas." Dr. E. G. McCormack, Prairie Grove, was elected president; Dr. Buchanan Hatchett, Fort Smith, vice-president, and Dr. Frank B. Young, Springdale, secretary and treasurer.

Minnesota Valley Medical Society.—The twenty-third annual convention of this society was held in Mankato, Minn., December 4, Dr. William J. Mayo, Rochester, in the chair. The following officers were elected: Dr. William Jacoby, Mankato, president; Drs. Michael Sullivan, Adrian, Louis A. Fritsche, New Ulm, and Archer C. Jacobs, Elmore, vice-presidents; Dr. Edwin D. Steel, Mankato, secretary, and Dr. George F. Merritt, St. Peter, treasurer. The next meeting will be held at St. Peter, in May, 1903.

University of Michigan Clinical Society.—The clinical staff of the University Hospital, Ann Arbor, have formed a

society. The first meeting was held November 28. Dr. Charles B. Nancrede was elected president, and Dr. Joshua G. R. Manwaring, secretary. Dr. George Dock reported a case of amebic dysentery, with abscess of the liver; Dr. Reuben Peterson showed a patient with an inverted uterus; Dr. Flemming Carrow exhibited a patient with interstitial keratitis, and Dr. E. A. Willis a case of tuberculosis of the pharynx.

NEW YORK ACADEMY OF MEDICINE.

Regular Meetings, held Nov. 20 and Dec. 4, 1902.

The President, Dr. Robert F. Weir, in the Chair.

The November 20 Meeting.

The Harder Variety of Hodgkin's Disease.

DR. WILLIAM S. HALSTED, Baltimore, said that the chief symptoms were enlargement of the lymph glands, and usually also of the spleen, with progressive anemia. In about one-third of the cases the liver is involved. The disease usually begins in the cervical glands. Fever had been noted by most writers, and had been present in all of the 11 cases observed by Dr. Halsted. If the cervical glands on one side only are enlarged, it will usually be impossible to make a diagnosis from inspection alone. The enlarged glands are often the size of a Madeira nut, and their bloodlessness is characteristic. There is usually also a suggestion of translucency. Eight of the 11 cases observed at the Johns Hopkins Hospital had been admitted since 1899, 4 of them this year. Ten of the patients were whites; 8 were males. Only one developed tuberculosis. Of the 8 operative cases 7 were known to be living and apparently in good health; one could not be followed. Tuberculin had been given to all but one of the cases. Dr. Halsted spoke in the highest terms of the microscopic work on Hodgkin's disease done by Dr. Dorothy Reed, one of Dr. Welch's pupils.

Although literature shows 104 cases reported cured, Dr. Halsted said there is no evidence to show that a single one has been cured.

A Rare Affection of the Lymph Glands.

Dr. Halsted then reported in detail a remarkable case, which it was thought might prove to be a new affection of the lymph glands. The patient, an intelligent German, 33 years of age, had been under observation from February to August, 1902. He had been well until eight years ago, when a painful, tender swelling developed high up in the right axilla. The growth was removed at the clinic of Mikulicz, but the pain soon returned and continued ever since. For two years there had been a swelling above the right clavicle, which sometimes became tender, at which times the pain was less acute. The skin over the clavicle and in the supra- and infra-clavicular fossæ was red and thin, and the pectoral muscle appeared to be infiltrated by inflammatory products. In the axilla was a mass similar to the one over the clavicle. Tuberculin was injected on three occasions without producing reaction. Professor Mikulicz had sent an abstract of the man's history, together with the statement that he had not been able to satisfy himself as to the exact nature of this curious case. On March 13 he was operated on, and it was found that the axilla was nearly filled with a myxomatous material; there was a pathologic fracture of the clavicle and a portion of this bone had been destroyed. The axillary vein was thrombosed and there was much connective tissue about the veins of the brachial plexus. Portions of the tissue removed were inoculated into the femoral vein of a dog, and into a cavity made in one femur, with a negative result. On May 9 a supplementary operation was done, and it was found that the clavicle was considerably larger, but the disease had apparently not advanced. When last seen, Sept. 15, 1902, there was no pain in the wound and no evidence of extension of the disease.

Dr. Halsted said he felt sure that this case represented a peculiar inflammatory affection of the lymphatic glands. Although the microscopic appearances of the tissue removed closely resembled those of Hodgkin's disease, the naked-eye appearances were very different.

DISCUSSION.

DR. JOSEPH SAILER, Philadelphia, pointed out the difficulty of drawing positive conclusions in the present state of our

knowledge. One should be cautious about assuming that the tubercle bacilli found in the glands bear a relation to pseudo-leukemia, 1, because these bacilli have been found in other forms of tumor, e. g., carcinoma and sarcoma, and 2, because the lymph glands are specially susceptible to infection by this bacillus. Cultures were made in one of his four cases, and a bacillus was found resembling the tubercle bacillus. The speaker was of the opinion that there were various conditions characterized by enlargement of the lymph glands, due to various etiologic factors, and that some of these conditions would, in the future, be successfully shown to be due to infections with the tubercle bacillus.

DR. H. M. BIGGS expressed the opinion that Hodgkin's disease is an infection, most probably tuberculous, and that several types have been included under this one name.

DR. ARPAD G. GERSTER also firmly believed that Hodgkin's disease was of the nature of an infection, and that the wide variations in the type of the disease explained the contradictory statements made with regard to the effects of treatment.

DRS. B. F. CURTIS and JAMES EWING also discussed the subject.

The December 4 Meeting.

The Need of a Radical Reform in the Teaching of Medicine to Senior Students.

DR. WILLIAM OSLER, professor of medicine in the Johns Hopkins University, delivered an interesting discourse on this topic to a large audience, which was notable for the many eminent medical teachers and academicians present. Dr. Osler said that the work of the first and second years in the medical school had been made exceedingly practical in recent years, but, in his opinion, there should be a change in the conception of how medicine should be taught, and the senior student should be started out at once on his road of life. In the ideal course the student really starts as a practitioner, and observer of disordered machines, with whose structure and orderly functions he has already been made familiar. It is a safe rule not to have any teaching except with a patient as a text, and care should be taken not to teach the student too much; rather give him good methods and a proper point of view, and the other things needful will be gradually added thereto.

A most important reform is demanded in the hospital. In the interest of the medical student, the profession and the public, the hospital authorities should be asked for much greater facilities than are at present enjoyed by the students at the majority of our medical schools. The hospital physician is almost sure to become slovenly unless he is engaged in teaching and is himself taught by his house physicians. The objection is often made that the patients dislike having students in the wards, but this he characterized as entirely fanciful. His own experience in this respect had been exactly the reverse, and it had not been a small one, comprising as it did twenty-five years of ward teaching. With ordinary discretion, and actuated by kindly feelings toward his patients the hospital physician will not experience the slightest difficulty in this respect. Again, in these days when the house staff is so overworked, it is almost impossible to conduct a hospital on modern lines without the help of students in much of the routine work.

At the Johns Hopkins the third-year student learns his medicine only in the out-patient department. The class is divided into three groups. Dr. Osler meets the class in the dispensary, in a specially-built class room, on three mornings each week. During the first part of the year they are taught physical diagnosis and history taking; later they are divided into small groups, and assigned to dispensary cases under the supervision of the out-patient staff. They are allowed to follow their patients, if need be, into the hospital wards, and are encouraged to report on them at stated intervals. There are no systematic lectures on the theory of medicine. The students are given simple ward instruction by him three mornings each week, and Saturday the work of the week is reviewed in the amphitheater, with the presentation of charts and records of important cases, together with the morbid anatomy specimens for the week. In

addition, he meets the fourth-year students one evening each week, and has a quiet talk with them over the clinical events of the week, especially the mistakes and failures, both their own and his. In this way the distance between student and teacher is lessened. While Dr. Osler was not theoretically opposed to systematic didactic lectures, and believed that in some instances the inspiration of a Trousseau would be valuable to the student, he was of the opinion that, for the most part, the ordinary systematic didactic lectures were no longer necessary. At stated intervals the assistants should hold recitations. He desired to plead most earnestly that the same privileges might be enjoyed by medical students in the other medical centers of the country.

DISCUSSION.

PROF. H. L. BURNELL of Harvard University said that while educators generally had watched with the keenest interest the doings at Johns Hopkins University, the conditions there, especially the small classes, made it possible for them to carry out plans of instruction which would not be feasible in other cities. He then described some reforms made at Harvard. Last June the curriculum had been so arranged as to give a minimum of required work and a maximum of elective work. The first year and a half is devoted to anatomy, histology, physiology, physiologic and pathologic chemistry, pathology and bacteriology; the second year and a half is devoted to medicine, surgery, obstetrics, hygiene, pharmacology, dermatology, gynecology, pediatrics, neurology, syphilis, ophthalmology, otology, laryngology, legal medicine and psychiatry. In the fourth year the student is allowed to devote his one thousand hours of time to any subject that he may elect, and in making this choice he is advised by a special committee. He hoped in time Harvard would add still other reforms. One would be to require all students to serve during the fourth year as clinical clerks and surgical dressers in the wards and outpatient departments of a hospital, the work being so arranged that in the first six months practically all of the student's time would be so occupied, while in the last half year it would take either his mornings or afternoons. It is well to encourage research work among the fourth-year students because of the excellent training it gives them. A third method of improving medical teaching is by making section work a prominent feature. To abolish the lecture seemed to him a great mistake.

PROF. ALEXANDER MCPHEDRAN of the University of Toronto insisted that we should ever keep before the public mind the fact that the function of the hospital is three-fold, viz.: 1, to care for the patients; 2, to train nurses for the care of people outside who can not go to the hospital, and 3, to train medical students to care for the poor in various parts of the country who can not come to the hospital. He had found Dr. Osler's plan feasible when his classes numbered fifty or sixty students, but now that there were a hundred or more students it was exceedingly difficult to give them the needed practical instruction. He had found that very few patients, indeed, in hospital objected to the students working there; after all, the patients usually acted as they were expected to do, and where it was the custom for students to be instructed in the hospital the patients rarely objected—indeed, they sometimes thought they were not treated rightly if not given a full share of the students' attention. The law with regard to obtaining a license to practice medicine in Toronto made it necessary for them to continue the didactic lectures, but he believed the fewer of these lectures the better.

DR. E. G. JANEWAY described the situation in New York City, and pointed out that it would be impracticable to turn the large number of students into the wards of the hospitals, and that, moreover, didactic lectures and other modifications of the curriculum are demanded because the students are not specially selected by virtue of a specially liberal preliminary education as at the Johns Hopkins University. There is much room for improvement here in the matter of the hospitals, even the public ones, giving better facilities to students.

DR. W. B. JAMES of the College of Physicians and Surgeons said that, in the matter of the didactic lecture, every teacher should be a law unto himself. In his opinion the amphitheater

clinic still held an important place. He was not at all a believer in electives for the fourth-year students; the whole four years should be devoted to giving a symmetrical view of the entire field of medicine, with all its specialties.

DR. W. GILMAN THOMPSON said that it was possible to greatly overdo laboratory instruction. The aim of a medical school should be to graduate well-balanced practitioners of medicine so far as this can be done in a reasonable time. A great deal depends on whether or not the students have received a college education, on the size of the classes, the relation of the school to the hospital, and last, but not least, what sort of questions the state examining boards would ask of those applying for licenses to practice medicine. He did not favor the extensive use of didactic lectures, nevertheless they are of service in teaching certain general principles, and in filling in the gaps left by bedside instruction. It is impossible to demonstrate all the symptoms and signs of a disease on a particular case—indeed, there are many limitations to such instruction, and it is impossible to so fully control the clinical material as to present the different subjects in accordance with a prearranged system.

DR. E. B. CRAGIN spoke of the difficulties of teaching practical obstetrics to large classes, and said that, having a class of 200, he had decided that it was wiser to divide them up into groups of six and allow each section to live in the maternity hospital for two weeks than to try to teach them all the year by lectures on the theory.

DR. ELLSWORTH ELIOT spoke of the value of didactic lectures to students of surgery in preventing them from becoming confused in studying a subject that was changing so rapidly.

DR. OSLER, in closing the discussion, said that he pleaded for better facilities for utilizing for students the immense amount of clinical material that annually went to waste, and for the closer affiliation of the patient and student. What was wanted was an intimate contact of the student and teacher.

AMERICAN PUBLIC HEALTH ASSOCIATION.

*Thirtieth Annual Meeting, held in New Orleans,
Dec. 8 to 12, 1902.*

President, Dr. Henry D. Holton, Brattleboro, Vt., in the Chair.

The opening address of welcome was delivered by Rev. Max Heller of New Orleans.

After the transaction of routine business, the reading of papers and reports was begun.

Report of Committee on Disposal of Refuse Materials.

This was read by Dr. W. C. Woodward of Washington, D. C., and stated that the present condition of the art of disposal of city refuse had not advanced materially in the last year. Many of the largest cities in America have reduction plans for the extraction of the grease with more or less success. The latest, and in some parts of the country still the most common, method of disposal, namely, that of feeding kitchen garbage to swine, is now earnestly advocated by a prominent health officer, although most ardently opposed by most sanitarians for many years. It is advocated because under many conditions it is not unhealthful if properly conducted, and it is more economical in smaller communities than any other method. The Berlin proposition of converting kitchen garbage into compost has not yet been sufficiently tried. The results with this method in this country do not seem promising, except where the soil is very barren and the cost of labor very low.

Report of the Committee on Animal Diseases and Animal Food.

This report, read by Dr. M. P. Ravenel, Philadelphia, made reference to the experimental work of Ravenel, Mohler, De Jong, Delepine, Orth, Stenstrohm, Fibiger and Jansen, Max Wolff, Nocard, Arloing, Behring, and a number of other investigators. These investigations were sufficiently numerous and harmonious in the results to establish the following conclusions:

1. The bacillus tuberculosis found in human tuberculosis differed greatly in its pathogenic powers as obtained from different cases.

2. Two types of tubercle bacilli might be obtained from man, namely, one which was somewhat difficult to cultivate, which grew slowly, and the bacilli of which are short, stubby, and free from beading—the so-called bovine type; and the second, which was quite easily cultivated, grew rapidly, was longer, thinner, and inclined to show beading and curved forms—the so-called human type.

3. Virulent cultures might be obtained from both of these types, which, when inoculated, according to the methods used by Koch, and on the species of animals specified by him, produced progressive and fatal tuberculosis.

4. The contention that human tuberculosis could not be transmitted to asses, sheep, goats, and especially to cattle, had been completely disproved.

5. Koch's failure to produce tuberculosis in the animals named with bacilli from human sources was probably due to the use of bacilli of low pathogenic powers.

The report then discussed at length investigations as to the transmission of bovine tuberculosis to man. The results of investigations showed:

1. While the bacilli of human tuberculosis were found of feeble virulence for cattle, there was a considerable proportion of cases in which these bacilli were virulent for cattle as well as other animals.

2. Bacilli of both the bovine and human type had been obtained from cases of human tuberculosis.

3. Bovine bacilli introduced into the human tissues by accidental inoculation, if left, multiplied, and produced disease at the point of inoculation, and even recovered after a considerable time with their vitality and virulence unimpaired.

4. Various statistical studies indicated that a considerable proportion of cases of human tuberculosis, and particularly with children, originated from the ingestion of the bacilli with contaminated food.

It appeared to the committee, therefore, that the conclusions of Koch, announced at the British Congress of Tuberculosis, to the effect that bovine and human tuberculosis were different; that human tuberculosis could not be conveyed to cattle, and that man was insusceptible to bovine tuberculosis were disproved, and should no longer have weight with sanitarians. The evidence adduced indicated that greater care should be exercised to prevent infection with bovine tuberculosis, and particularly to guard children from tuberculous milk.

Officers for the Ensuing Year.

The following officers were elected: President, Dr. Walter Wyman, Washington, D. C.; first vice-president, Dr. C. P. Wilkinson, New Orleans; second vice-president, Dr. John L. Leal, Paterson, N. J.; secretary, Dr. Charles O. Probst, Columbus, Ohio; treasurer, Dr. Frank W. Wright, New Haven, Conn.

Officers of the Bacteriological and Chemical Section.

These were elected as follows: Chairman, Dr. H. L. Russell, Madison, Wis.; vice-chairman, Dr. V. A. Moore, Ithaca, New York; secretary, Mr. G. C. Whipple, Brooklyn, New York; recorder, Dr. Henry D. Pease, Albany, New York.

The next meeting will be held at Washington, D. C., in 1903.
(To be continued.)

SANITARY CONFERENCE OF THE AMERICAN REPUBLICS.

Meeting held in Washington, D. C., December 2 to 6, 1902.
(Concluded from page 1543.)

The Mosquito and Yellow Fever.

CHARLES J. FINLAY, M.D., chief sanitary officer of Cuba, answered the question: "Is the Mosquito the Only Agent Through Which Yellow Fever Is Transmitted?" He stated that there can be no cause for considering fomites as a factor in the propagation of yellow fever and that the mosquito appears to be the only insect capable of transmitting yellow fever infection and, furthermore, that the only mosquito which is a natural transmitter of the disease is the *Stegomyia fasciata*, in which he observed certain peculiarities as to the laying of ova and the readiness of renewing its bites whenever the digestion of a previous meal had been completed. On investigation this particular mosquito was found to fulfill all the conditions which have been postulated in the author's theory, and investigations on the human subject have further borne out his hypothesis. He explains that the power of transmitting yellow fever, as exhibited by the *stegomyia*, should not be considered as an additional functional manifestation on the part of this insect, but as a deficiency in the germicidal power of its venom as compared with that displayed by the venom of other blood-sucking insects. The yellow fever germ often passes unharmed into the stomach of the *stegomyia* and continues therein the mos-

quito phase of its existence, while in the case of any other blood-sucking insect it would have been destroyed on inhibition by the venom. So long as the true germ of yellow fever remains unknown, this hypothesis can not be verified under the microscope, but the principle seems to have been confirmed in the case of the malarial parasite which passed unscathed through the buccal cavity of the anopheles and continued to develop in the stomach, while in other species of gnats it reached the stomach already doomed to degeneration and death. The author concluded by saying that no valid reason has been brought forward thus far for supposing that any other insect or any other species of mosquito except the *Stegomyia fasciata* is capable of transmitting yellow fever.

Uncinariasis.

DR. CHARLES WARDELL STILES had made extensive studies of this disease for the purpose of finding a remedy. He explained that the uncinaria produces a condition closely resembling the persistent malaria for which it is almost invariably mistaken. Among other symptoms of the disease the author stated that it created an abnormal and peculiar appetite and suggested that possibly the dirt-eating and pickle-eating habits noticed in some parts of the South might be due to the presence of the hookworm. He urged that the information concerning the malady be spread broadcast, and predicted that under this propaganda a gradual and noticeable improvement would take place in the condition of the "poor whites" of the South.

International Quarantine.

THE COMMISSION appointed at the meeting held in Mexico in January of this year made an exhaustive report regarding the quarantine of certain diseases. It presented resolutions providing that, with reference to yellow fever, the detention of vessels at the port of arrival should not exceed a period of twelve hours for a visit of inspection, counting from the time of the arrival, and of a period not to exceed twenty-four hours for disinfection after the inspection of the passengers and crew.

In regard to bubonic plague a similar resolution was proposed, consist of a sanitary medical inspection in order to obtain knowledge that there are no cholera patients on board the vessel; that there are no persons suspected of suffering from cholera, because some patients have been found suffering from vomiting and diarrhea, in which case it would be necessary to make a bacteriologic examination of the excreta; in placing suspected passengers under vigilance and isolation for any cases that are taken ill, and finally in the isolation of affected patients until entirely recovered.

In regard to bubonic plague a similar resolution was proposed, with this addition: that the disinfection of passengers, after the visit of inspection of the vessel is over and when the passengers are already out of the vessel, should be for affected persons until the disease has entirely disappeared, and for suspected persons until the termination of bacteriologic examination. The period of quarantine or vigilance will be for seven days in case of persons suspected of plague infection, and when a case of this disease is found during the period of detention for the purpose of disinfection, that period should be extended for a time sufficient to carry out the destruction of the rats.

Agents of Infection.

DR. ARTHUR R. REYNOLDS, Health Commissioner of Chicago, offered the following preamble and resolution, which places more or less responsibility on the animal and vegetable source of infection:

Bubonic plague and other diseases are spread by rats, mice and other lower animals, which to a great extent find sustenance in animal and vegetable kitchen wastes, commonly called garbage; therefore, be it

Resolved, That all organic waste or garbage should be kept separately on the premises until it can be removed unmixed with anything else and destroyed.

Election of Officers.

The officers nominated by the Committee on Organization and mentioned in the report of the committee on page 1544 were declared duly elected.

Prophylaxis of Yellow Fever.

DR. GUILLERAS, Cuba, offered the following resolution regarding the mosquito as a factor in the communication of yellow fever:

The measures of prophylaxis against yellow fever shall be based on the fact that up to the present time the bite of certain mosquitoes is the only proven natural means of propagation of yellow fever; that the governments represented in this conference approve the measures employed in Havana for the prevention of the spread of the disease "on land," for the isolation of cases, and the fumigation of buildings, it being understood that said measures are based on the principles enunciated in the first part of this resolution; that the prevention of the importation of this disease by vessels wherein persons actually infected are found must conform to the methods employed on land, yet there are questions concerning the importation of infected mosquitoes that require further study before any decided modification of the quarantine laws can be recommended.

International Sanitary Bureau.

The conference adopted an extended resolution pertaining to the work of the International Sanitary Bureau whose permanent headquarters are to be in Washington. The resolution makes it the duty of the bureau:

To urge all the parties represented in the conference to promptly and regularly transmit to the bureau all data of every character relative to the sanitary condition of their respective ports and territories; to furnish the bureau every opportunity and aid for thorough, careful and scientific study and investigation of outbreaks of pestilential diseases occurring in the territories of the republics; requires the bureau to lend its aid and experience toward the widest possible protection of the public health of each of the republics, in order that diseases may be eliminated and commerce facilitated; and also to encourage and aid or enforce in all proper ways the sanitation of seaports, including the sanitary improvements of harbors, sewerage, drainage of the soil, paving, elimination of infection from buildings, and the destruction of mosquitoes and other vermin.

To carry out the above provisions it was recommended that a fund of \$5,000 be collected by the Bureau of American Republics.

CHICAGO MEDICAL SOCIETY.

Regular Meeting, held Dec. 3, 1902.

The President, Dr. Wm. A. Evans, in the Chair.

Sclerosis of the Mastoid Process.

DR. OTTO J. STEIN reported in detail cases presenting conditions of drug mania, but wherein operative measures revealed an advanced state of osteosclerosis of the mastoid process. He concludes that, as the result of changes going on within the mastoid process, wherein the mastoid cells are gradually being obliterated by the formation of new bone tissue, the symptom of pain may become so persistent and intense as to cause patients to take recourse to the effects of powerful drugs in order to obtain relief from suffering. The character of the pain is described as very deep seated; a dull ache, similar to a slight toothache, being constantly present. At intervals the pain increases to the extent of being neuralgic in character. It is centered mainly back of the ear, in the mastoid region, and thence radiating up toward the side of the head and down into the neck. Noteworthy is the absence of pain in front of the ear. Pressure over the mastoid, usually just back of the meatus, will elicit a sharp sensation of pain.

Dr. Stein holds that removing a core of bone from the eburnated mastoid process is justifiable and productive of prompt relief.

DISCUSSION.

DR. NORVAL H. PIERCE said that if there is such a thing as a primary sclerosis of the process of the mastoid which causes pain sufficient to force an individual to take morphin, etc., it adds a great deal to the difficulty in diagnosis. The literature does not warrant a belief that there is such a sclerosis. There is sclerosing osteitis in the mastoid, but this always follows suppuration in the antrum and the cells in juxtaposition thereto, and is the same process found in other similar bones. Therefore, one should be careful in accepting the conclusion of the essayist, inasmuch as it would be difficult to differentiate between this condition and true hysteria.

DR. WM. L. BALLENGER believes that there are cases of sclerosis of the mastoid attended by pain, but does not think that they are primary, that is, he does not believe a sclerosis of the mastoid exists previous to a suppurative process. He did not understand Dr. Stein to claim that these cases of

sclerosis of the mastoid are primary, but that they might present with marked evidences at the time of the middle-ear disease. In dealing with these cases, one should differentiate between the neurasthenic cases referred to and a central mastoiditis, that is, a mastoiditis limited to the center of the mastoid process, without any extensive degenerative changes in the mastoid in general.

DR. HENRY GRADLE said that a mastoid operation is altogether too large to undertake without positive indications. If suppurative disease of the mastoid is suspected, one may be justified in operating, but where this can be excluded, it does not seem prudent to operate, as operative procedure may result in accidental complications in the hands of the best operators.

DR. STEIN, in closing the discussion, said that he did not state whether this is a primary or secondary condition. He is fully aware that the tissues are such as to lead one to think that the condition is essentially secondary, but he did not presume to answer the question definitely whether it is primary or secondary.

Splenectomy.

DR. J. CLARENCE WEBSTER reported a case of splenectomy. The patient was 37 years of age, family history negative. She gave a history of repeated attacks of malaria during her residence in the South for many years. Twice she was jaundiced, and twice had a severe pulmonary hemorrhage. Twenty-six years ago she had typhoid fever, and when a child was the subject of rheumatism. Her present illness dates back seventeen years, when she observed after the birth of her child a painful, slowly-growing swelling in the right iliac region. Four years ago a laparotomy was performed, and the operator said he found an inoperable tumor connected with her right kidney. When seen by Dr. Webster during the summer, she complained of severe pain in the abdomen, chest, shoulder and the right iliac region, dysmenorrhea, frequent and painful micturition, and shortness of breath. For the past eight years she had very severe colicky pains in the right side, which at times were so intense as to demand the administration of chloroform. After the subsidence of these pains, her urine was very dark, reddish-brown and of strong odor.

Physical examination revealed an emaciated and sickly-looking woman. The skin of the entire body was of a brown color, with here and there patches of intenser pigment. There were in and on the skin innumerable nodules. Examination of her blood showed 4,016,000 red cells, 16,800 whites, and 70 per cent. hemoglobin. Her temperature for the most part was slightly above normal, from 99 to 101 F.

Bimanual vaginal examination revealed a fixed and retroverted uterus, with appendages not distinctly palpable, but fixed and tender, and close to the right side of the uterus, extending to the ilium, and completely filling the right iliac fossa, was a large movable tumor. Examination of the bladder by the Kelly method was negative save a congested area behind the trigone. Catheterization of the ureters revealed a constriction of the right ureter three inches above the bladder orifice, which could be passed with a catheter. The urine obtained from the right ureter contained some blood, 1.3 per cent. of urea, and, microscopically, contained some small squamous and cuboidal cells, with a few hyaline and blood casts. The urine from the left kidney contained no blood or cellular elements, urea 1.7 per cent., and the quantity that was voided during the period that the catheters were left in the ureters (one hour and fifteen minutes) was three and one-half times greater than on the right side.

After treating the patient for a few months on tonics, she was operated on, September 25, and a large tumor was removed, enveloped in dense adhesions, and which was fixed to the brim of the pelvis, adherent to the uterus and its appendages, to the bladder, and also the vermiform appendix. This tumor was found to be a greatly-enlarged spleen. The patient made a very satisfactory recovery, and was exhibited by Dr. Webster. Microscopic sections of the spleen and the cutaneous nodules were also shown.

Funnel Pelvis.

DR. CHARLES B. REED reported an interesting case of funnel

pelvis. May 4, 1900, he was called in consultation to see a patient, aged 19, in her first confinement. In spite of the utmost efforts attempts at delivery failed, and craniotomy was done on the asphyxiated child. In October, 1901, she reappeared, pregnant for the second time, and Cesarean section was found necessary. The child weighed $7\frac{1}{2}$ pounds, and after four weeks the mother left the hospital with her babe in excellent condition.

DISCUSSION.

DR. RUDOLPH W. HOLMES thought that funnel pelvis, taking all types, is not so infrequent as has been generally believed, but absolutely typical funnel pelvis, with normal bim and contracted outlet, is very infrequent. The most frequent type is the generally contracted one, with the contraction most marked at the outlet.

DR. REED said that forceps are most frequently used in these cases to terminate labor after the head is engaged, and failure with forceps means craniotomy, and success with the forceps might mean extensive lacerations of the soft parts of the mother, with the usual results.

The Relation of Gonorrhea to Tuberculosis of the Genito-Urinary Tract in the Male and Female.

DR. DANIEL N. EISENDRATH presented a study of the cases found in the literature and in his own practice, and drew the following conclusions:

1. That in patients suffering from an acute gonorrhea there may be an almost imperceptible transition into a malignant type of tuberculosis.

2. That subacute or chronic gonorrhea may mask the presence of a tuberculosis. That these, as well as the acute form, may act as predisposing and, at times, as exciting causes of tuberculosis.

3. In patients who show evidence of local complications of gonorrhea, such as prostatitis, vesiculitis, cystitis or epididymitis, one should always bear in mind the possibility of tuberculosis and examine the urine for tubercle bacilli, if anti-gonorrheal treatment causes no improvement.

4. In patients with marked tubercular history, an attack of gonorrhea should be carefully watched, and the prognosis be guarded.

5. Gonorrhea, both in the male and female, often prepares the soil for a later invasion of the tubercle bacillus.

DISCUSSION.

DR. A. J. OSCHNER quoted Hunter Robb of Cleveland, who found, in a very large percentage of cases, infection of the tubes, which, in their gross appearance, seemed to be purely gonorrheal in origin.

DR. G. FRANK LYDSTON thought no one would deny that any severe inflammation of a structure so important as the genito-urinary tract would serve as a possible predisposing or exciting cause of tubercular infection. He believes, however, that if gonorrhea is a powerful exciting or predisposing cause of tuberculosis, or so important as the essayist seems to believe, the profession would have a tremendous number of cases to treat of apparently primary tuberculosis of the genito-urinary tract, and that portion of the genito-urinary tract which is most severely affected, the distal portion, should exhibit many cases of primary tuberculosis, but, as a matter of fact, those cases are exceedingly rare.

DR. CHARLES S. BACON thinks the use of the term primary tuberculosis is misleading. He does not understand Dr. Eisen-drath to imply that there was primary tuberculosis, but secondary tuberculosis, that develops in this region as the result of gonorrhea.

DR. F. KREISSL expected to hear the essayist mention the simultaneous primary infection of the genito-urinary tract with gonorrhea and tuberculosis, of which several well-observed cases are on record. He had seen a few. Adenitis, epididymitis and prostatitis, of the type described, ought to arouse suspicion and call for more careful investigation. Inasmuch as primary tuberculosis of the genito-urinary tract is comparatively rare, and its early detection still more infrequent, the well-known relation between this disease and gonorrhea ought

to be a valuable auxiliary means in a possible early diagnosis and radical treatment.

DR. RACHELLE S. YARNOS exhibited a large fibroid tumor of the uterus; also the pregnant uterus, both of which were removed a few hours previous to their exhibition.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Acne.

John V. Shoemaker, in the *Med. Bulletin*, states that hygienic and dietetic regimen should be observed. Exercise in moderation, fresh air and sunlight are beneficial influences. Avoid all indigestible foods and use local means to reduce inflammation. One of the most effective means is bathing the seat of the disease in water as hot as can be borne. The addition of borax or boric acid to the water is recommended. In the early stages of the malady ointments containing lead zinc or bismuth are beneficial. When the disease has reached a chronic form the applications should be of a more or less stimulating character. The gastrointestinal tract must not be overlooked. In order to overcome the sluggish movement of the intestinal canal the following pill should be taken at bedtime:

R. Pil. hydrargyri	gr. xii	75
Podophyllotoxini		
Aloini, aa	gr. i	06
Olei cinnamomi	m. i	06

M. Ft. pil. No. xii. Sig.: One pill at bedtime.

In order to improve the digestion the following mixture should be given after meals:

R. Acidi phosphorici dil.	3v	20
Tinct. cinchonæ comp.		
Tinct. gent. comp., aa	3ii	60

M. Sig.: One teaspoonful well diluted after each meal.

Chloroform in Earache.

According to an abstract in the *Courier of Med.*, a simple, harmless and infallible cure for earache is effected by making a small funnel of stiff writing paper and saturating a ball of cotton the size of a hickorynut with chloroform and drop it into the funnel; place the small end of the funnel into the ear, draw a long breath and then blow the breath into the large end of the funnel; the fumes of the chloroform are thus carried into the ear and all pain ceases at once.

Atropin in Lead Colic.

Adolph Weber, according to an abstract in *Merck's Archives*, states that he has employed atropin in several cases of lead colic due to lead intoxication. At first he uses extract of belladonna in doses of $\frac{1}{4}$ gr. (.015) frequently repeated, but later he has given preference to the alkaloid atropin in dose of 1/60 gr. (.001) to 1/20 gr. (.003). Prompt relief generally follows, with the exception of cases in which opium has been previously administered. In such cases even enormous quantities of atropin remain ineffective, being neutralized by the opium. The atropin should be given hypodermically. No untoward effects have been observed.

Hydrotherapy in Chlorosis and Secondary Anemia.

According to the "System of Phys. Ther." the rules for the treatment of chlorotic and anemic states should be: 1. Avoidance of a reduction of the body-temperature below the normal, therefore, absolutely little abstraction of heat. 2. Increase in the irritability of the peripheral nerve termination, by means of preparatory heat accumulation or heat supply. 3. Vigorous nerve-stimulation by means of water at the lowest possible temperature.

Dr. Frank Billings, in an article on pernicious anemia, states that hydrotherapy applied in the form of high enemas of normal salt solution repeated two or three times in the twenty-four hours is of service. This treatment is based on the

theory that the disease is of probable toxic origin, with the seat primarily in the intestine.

Sedative in Acute Gastric Catarrh.

The following combination is of service in relieving the distress and vomiting in acute gastric catarrh:

R. Bismuthi subcarb.	3v	20
Acidi hydrocyanici dil.	3i	4
Liq. morph. hyd. (1 per cent.)	3ii	8
Mucil. acaciæ	5iss	45
Aq. chloroformi q. s. ad.	5iv	120

M. Sig.: One teaspoonful four times a day (before meals).

Diet in Gonorrhea.

The dietetic treatment of gonorrhea, according to H. Gilman Thompson, consists in avoiding all alcohol and stimulating food and drinking bland diluents. In severe cases, and in cases among young children who have in some manner been infected, a skimmed milk diet should be ordered at first. Later, light farinaceous articles, stale bread and butter, milk and rice puddings should be added. They must avoid acid fruits, all highly seasoned and fried foods, condiments and pastry. Alcoholic drinks in all forms are absolutely prohibited. Malt liquors are especially bad, as they are in all diseases of the urethra, bladder or prostate. No late meals should be taken. By observing these directions troublesome chordee and ardor urinæ, so apt to occur in the first fortnight, may be prevented. Large quantities of such waters as soda, seltzer, apollinaris and two or three quarts of plain water should be drunk. The fluid dilutes the urine, diminishes the danger of cystitis, and has the additional advantage of decreasing the appetite.

Dionin.

Darier, in *Ther. Monthly*, recommends dionin for tracheitis or bronchitis, prescribed in combination as follows:

R. Dioninæ	gr. iii-v	20-30
Quininæ sulph.		
Sodii bicarb., āā.	3ss	2

M. Ft. Chart. No. x. Sig.: One powder three times daily; or:

R. Dioninæ	gr. iii-v	20-30
Ammonii chloridi	gr. v-viii	30-50
Sodii bicarb.	3iiss	10

M. Ft. Chart. No. x. Sig.: One powder three times a day.

Fromme and Heinrich report this preparation to be a valuable substitute in morphinism; its utility being attributed to the fact that it produces no habituation, also in consequence of its ready solubility accumulation is less liable to take place. They claim that the morphin hunger is appeased and is not replaced by hunger for dionin. It is recommended in such cases in doses ranging from gr. 4/5 to gr. 1 (.05-.06). And to replace from 1/3 to 3/5 gr. of morphin he employs a daily total of gr. xv (1.00) of dionin.

Dionin is ethyl morphin hydrochlorate. It is soluble in seven parts of water, two of alcohol, and in twenty of syrup. The usual adult dose ranges from gr. 1/4 to gr. i (.015-.06).

Hot and Cold Water in Eye Diseases.

The employment of hydrotherapeutic measures in the treatment of diseases of the eye are briefly considered, by W. O. Nance, in *Med. Standard*, as follows:

1. Heat and cold are best applied to the eyes by means of moist pads. They are more efficacious when employed in this manner than by means of the coil or bladder, in that their action is more penetrating, and their effect is more germicidal.

2. The application of heat is indicated in degenerative corneal processes—interstitial and phlyctenular keratitis, corneal ulcers, pannus, infected corneal wounds, suppurative panophthalmitis, in iritis and cyclitis, in muscular spasm, and in contusion and ecchymosis of the lids (black eye) to hasten the absorption of extravasated blood.

3. The application should be of the highest temperature the patient can endure (110 to 135) for a period of fifteen minutes, and repeated at intervals of two or three hours for several hours.

4. Cold is indicated in hyperemia and inflammations of the

conjunctiva. In purulent conjunctivitis it is the remedy par excellence. In traumatism, especially those of the iris and lens and in the early treatment of contusions of the lids its employment is of value.

5. In purulent conjunctivitis iced applications may be continuously used for many hours so long as the cornea remains unimpaired, in which instance they are positively contraindicated.

6. Hot applications greatly assist the rapid absorption of various medicaments employed in ophthalmic practice, and when used for this purpose should immediately precede the installations of such solutions.

Medicolegal.

Twelve Thousand Five Hundred Dollars for Injury to Eyes.—The Supreme Court of Rhode Island holds, in the personal injury case of Cummings vs. The National & Providence Worsted Mills, that a verdict for \$12,500 could not be said to be excessive, where a belt parted and one end of it struck a man 51 years of age and earning \$1,000 a year in the eyes with a force sufficient to break the glasses which he wore, driving the glasses into his eyes and displacing the interior parts of both eyes, causing the entire loss of sight in one eye and the loss of distinct vision in the other even at a distance of a few inches, with the probability, according to the undisputed medical testimony, of total blindness in the near future.

State Board of Health and Location of Cemetery.—The Supreme Court of New Jersey holds, in *Dodd vs. Francisco*, that, on appeal of the State Board of Health to reverse the determination of a municipal council and a local board of health respecting the location of a new cemetery, the state board, although acting judicially, is not required to examine witnesses under oath on matters in controversy before it. The matters to be considered by the board respecting the propriety of locating a new cemetery, it says, are of so general and public a nature that they can be decided more intelligently by observation and discussion than by testimony. In this respect the board resembles boards of assessment, whose proceedings involve the exercise of judicial functions, but whose judgment is to be founded on facts obvious to their senses, or ascertained by inquiry and examination; who, although not authorized to call witnesses and examine them on oath, should, as do surveyors and freeholders in road cases, visit the premises in controversy and avail themselves of every accessible means of information likely to aid them in reaching a proper determination. On such an appeal as above stated the State Board of Health may consider a report made by one of its committee on a previous hearing in regard to the same matter. On such an appeal the board is not confined to the determination of sanitary questions. The determination of the board on such an appeal is presumed to rest on proper grounds, and that presumption can be overcome only by the certificate of the board to the contrary, or by clear proof to the contrary in case a rule or order to obtain the board's certificate prove ineffectual.

Liability for Hastening Development of Disease.—The Supreme Court of California holds, in the personal injury case of *Campbell vs. Los Angeles Traction Company*, that an instruction was not erroneous which told the jury that if they found from the evidence that the party suing received the injury complained of by reason of the company's negligence alleged in the complaint, and at the time of the reception of such injury she was suffering from some disease, and they further found that such injury hastened the development of such disease, and that thereby, without the fault of the party suing, her present condition, whatever they might find that to be, had resulted from such injury, then the party suing was entitled to recover such damages as they might determine she had sustained from the injury. The court says that the thing involved was not special damage, requiring special averment, although two or three cases which were cited seemed

to support a contrary contention. Physical suffering and injury caused by violence to the person are the natural and direct consequences of the wrong, and are not in the nature of special damage, which must be particularly averred. Again, it says that the liability of one who commits an assault and battery or other unlawful violence to the person of another is not to be measured by the physical strength of the party injured, or his capacity to endure suffering. One of weak physical structure, or small vitality, or in ill health, has as much right to protection from violence as a robust athlete; and in either case the physical injury, the bodily harm, which is actually caused by the violence, whether he be strong or weak, healthy or sickly, is the natural consequence of the wrong, and need not be specially averred.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Philadelphia Medical Journal, December 6.

- 1 *The Symptoms of Prostatic Hypertrophy, Their Cause and Their Relief. Edward L. Keyes, Jr.
- 2 *The Existence of Typhoid Fever in Atlantic City. Phillip Marvel.
- 3 Personality as a Factor in Medical Education. Edward A. Balloch.
- 4 *Some Practical Deductions from 63 Successful Consecutive Operations for Inguinal Hernia. R. C. Hill.

New York Medical Journal, December 6.

- 5 *The Treatment of Vascular Neoplasms by the Injection of Water at a High Temperature. John A. Wyeth.
- 6 *The Functional Weight-Bearing Method of Treating Congenital Dislocation of the Hip, as Originated and Practiced by Professor Lorenz. Dexter D. Ashley.
- 7 *The Diagnosis and Operative Treatment of Femoral Hernia, Including a Description of the Fabricius Operation. Russell S. Fowler.
- 8 *The Works of Edward Jenner and Their Value in the Modern Study of Smallpox. (Concluded.) George Dock.
- 9 A Case of Cancer of the Larynx Cured by the X-Rays. W. Scheppegrell.

American Medicine (Philadelphia), December 6.

- 10 *Pus in the Pelvis Depending upon and Complicating Appendiceal Disease in the Female: Methods of Treatment. John B. Deaver.
- 11 *Vaginal Section in Suppurative Disease of the Pelvic Structures: Indications and Technic. E. E. Montgomery.
- 12 *Pus in the Pelvis as a Result of Bone or Joint Necrosis: Diagnosis and Treatment. H. Augustus Wilson.
- 13 *Drainage in Operations for Suppurative Disease of the Pelvic Organs. J. M. Baldy.
- 14 *Clinical Notes on Some Recent Abdominal Cases. Reuben Peterson.
- 15 *The Gynecologic and Obstetric Aspect of Repeated Abortion. S. Marx.
- 16 The Modern Treatment of Eclampsia. Herbert M. Stowe.
- 17 *Reflections on State Medical Board Examinations and Interstate Reciprocity. Aloysius O. J. Kelly.
- 18 Mineral Waters: Their Use and Abuse. C. W. Chancellor.

Medical News (N. Y.), December 6.

- 19 *Volvulus as a Cause of Intestinal Obstruction: With a Report of Three Cases Operated upon Successfully. John F. Erdmann.
- 20 *Notes upon Several Unusual Larval Insects Occurring as Parasites in Man. Allen J. Smith.
- 21 Cellulitis of the Orbit, Eyelids, Forehead and Cheek, Following an Infected Sore upon the Finger: Treatment by Free Incisions and Subcutaneous Injections of Sublimate. Charles Stedman Bull.
- 22 *A Comparative Study of the Value of Methylene Blue and Quinin in the Treatment of Malarial Fever. John T. Moore and W. L. Allison.
- 23 Description of an Osteoplastic Metastatic Carcinoma of the Sternum Following a Primary Carcinoma of the Uterus. A. C. Yoder.
- 24 Laboratory Methods and the Country Practitioner. Edwin A. Murbach and John U. Fauster.

Medical Record (N. Y.), December 6.

- 25 *Operations upon the Uterine Appendages for Sterility. W. M. Polk.
- 26 *Spinal-Cord Tumors—Tumors of the Central Nervous System: Remarks on Noteworthy Cases. Joseph Collins.
- 27 *Are Vessels Infected with Yellow Fever? A Reply to Dr. Carter. Alvah H. Doty.
- 28 *A New Stain for Diphtheria Bacilli. William G. Schauffler.

Boston Medical and Surgical Journal, December 4.

- 29 The Role of the Physician. Charles D. Young.
- 30 *Some Observations upon the Value of the Phloridzin Test for Estimating the Functional Capacity of the Kidneys; Renal Sufficiency. Francis S. Watson and W. T. Bailey.
- 31 *Cryoscopy. William T. Bailey.
- 32 *A Note on Pleurisy in Typhoid Fever. George G. Sears.

- 32½ Infant Feeding. Ernest B. Emerson.

St. Louis Medical Review, November 29.

- 33 New St. Louis Water Supply. L. H. Laidley.
- 34 Public Sanatoriums for Tuberculous Persons. George Homan.

Cincinnati Lancet-Clinic, December 6.

- 35 The X-Ray in Lupus Vulgaris. M. L. Heldingsfeld.
- 36 The Ups and Downs of a Physician's Life. (Continued.) George J. Monroe.
- 37 Erysipeloid—Report of Case. H. Van Allen Spargur.
- 38 Surgery of Prostate, Pancreas and Diaphragm. (Continued.) B. Merrill Ricketts.

Medical Fortnightly (St. Louis), November 25.

- 39 The Advantage of Discipline to the Student of Medicine. F. Savary Pearce.
- 40 Ligation of Arteries (Cocain Anesthesia). B. Merrill Ricketts.

Medicine (Detroit, Mich.), December.

- 41 *The Ocular Manifestations in Chronic Bright's Disease. G. E. de Schweinitz.
- 42 *A Case of Gliomatosis. Augustus A. Eshner.
- 43 *Gallstones, or Cholelithiasis. A. A. Kerr.
- 44 *Nephritic Eye Lesions. Willis O. Nance.
- 45 *Paralysis and Damage Suits. Charles J. Aldrich.

Louisville Monthly Journal of Medicine and Surgery, December.

- 46 A Case of Decidua Maligna, with Remarks. Lewis S. McMurtry.
- 47 *Treatment of Fractures of the Patella. David C. Peyton.
- 48 Gunshot Wounds of the Kidney, with Report of a Case. W. O. Roberts.
- 49 Intestinal Autointoxication. F. C. Simpson.

Northwestern Lancet (Minneapolis), December 1.

- 50 *Report of a Grave Case of Tetanus Treated with Veratrum Viride, with Recovery. H. B. Sweetser.
- 51 A Case of Renal Tuberculosis. George Douglas Head.
- 52 *The Use of Formaldehyd in Diphtheria. C. A. Donaldson.

Colorado Medical Journal (Denver), September.

- 53 Cutaneous Tuberculosis. Henry G. Anthony.
- 54 Serum Treatment of Diphtheria. C. N. Ray.
- 55 *Uncertain Therapeutics. J. M. Blaine.
- 56 Tonsillitis. G. W. Robinson.
- 57 *Some Business Aspects of Medical Practice—Physicians' Business Leagues. John T. Davison.

Archives of Ophthalmology (New Rochelle, N. Y.), November.

- 58 Congenital Cyst of the Eyeball; Microscopic Examination. Arnold Knapp.
- 59 A Case of Hard Chancre of the Upper Lid. Fritz Weber.
- 60 Reflex Nystagmus. Carl Bir.
- 61 A Contribution to Irido-cyclitis, or phthisis Bulbi, in Cases of Sarcoma of the Choroid. K. Jarnatowski.
- 62 *Contributions to the Anatomy of the Myopic Eye—External Form, Ciliary Muscle, Optic-Nerve Entrance, Macular Disease, Spontaneously Cured Detachment of the Retina. L. Helme.
- 63 *Case of Chestnut-burr Thorns in the Cornea; Recovery, Partly by Absorption, Partly by Removal of the Thorns. C. B. Meding.
- 64 *On the History of the Theory of Sympathetic Ophthalmia. H. Gifford.

Southern Practitioner (Nashville, Tenn.), December.

- 65 X-Ray and X-Ray Therapeutics. G. P. Edwards.

Canadian Journal of Medicine and Surgery (Toronto), December.

- 66 *Value of the Roentgen Rays in Cancer. A. R. Robinson.
- 67 Neuroses as Seen in Orthopedic Practice. B. E. McKenzie.
- 68 *The Telephonic Properties of the Inflamed Abdomen: A Sign Not Hitherto Described, Due to Paralysis of the Bowel in Peritonitis. George A. Peters.
- 69 Cesarean Section Ten Minutes After Death of the Mother; Child Alive. W. J. Fletcher, F. S. Webster and W. J. Wilson.

Indiana Medical Journal (Indianapolis), December.

- 70 A Case of Bowel Obstruction from Meckel's Diverticulum. J. C. Sexton.
- 71 Seminal Weakness. James H. Brill.
- 72 Operative Treatment of Adenoid Hypertrophy in the Vault of the Pharynx. William F. Clevenger.
- 73 Brief Consideration of Tent Life and the Treatment of Pulmonary Tuberculosis. Clarence L. Wheaton.
- 74 The Druggist of Fifty Years Ago. George W. Sloan.

Journal of the Association of Military Surgeons (Carlisle, Pa.), November.

- 75 *Remarks on the Effects of the Luger and Colt's Automatic Pistols. Louis A. LaGarde.
- 76 The Nurse Corps of the Army. Anita N. McGee.
- 77 Lessons Drawn from Practical Professional Experience with Trained Women Nurses in Military Service. John W. Ross.
- 78 The Most Practicable Organization for the Medical Department of the United States Army in Active Service. Part 2. Frederick P. Reynolds.

Memphis Medical Monthly, December.

- 79 Medicine and Some of Its Tendencies. J. B. McElroy.
- 80 Ophthalmia Neonatorum, or Infantile Conjunctivitis. W. T. Michle.

- 81 Three Months' Office Experience in the Treatment of Chronic Dysentery. John L. Jelks.
 82 Rupture of the Heart—Report of a Case. Cummings Harris.
 83 A Clinical Report of Three Rather Peculiar Cases. Edwin Williams.
 84 Feeding in Fevers. D. M. Hall.

1. **Symptoms of Prostatic Hypertrophy.**—Keyes reviews the symptoms and treatment of prostatic hypertrophy at length, and remarks that chronic obstruction of urination is the underlying cause of almost all the symptoms and may be regarded as due to elevation of the internal urethral orifice. Obstruction, however, may exist without symptoms and symptoms without obstruction. As the immediate cause of all the symptoms is congestion, hence to the patient the disease represents only a congestion, while to the surgeon it is an obstruction, an elevation of the urethral orifice. The relief of congestion may be relief of symptoms without regard to the obstruction, but this is purely palliative and is not the function of an operation. Radical treatment consists in permanent relief of the obstruction in the floor of the urethra with little regard to congestion, and this may be accomplished by cauterization or extirpation of the offending mass through a perineal or a suprapubic incision. The elective operation must attack the obstacle most directly and remove it most rapidly, while preventing hemorrhage and providing perfect drainage. Of the operations employed at the present day, the one which most often fulfills these conditions is perineal galvanoprostatomy, or Chetwood's operation. He describes this at length and discusses the other methods, showing the objections to them. Castration and vasectomy, he thinks, are likely to have only temporary effect, and the Bottini operation is a blind one and does not afford proper drainage, while suprapubic prostatectomy appears to be more dangerous than the perineal operation, and possibly does not afford as good drainage. It is more disfiguring and convalescence more delayed. Yet in enormous hypertrophy it may offer greater safety to the patient than a narrow opening and deep perineal wound. Of the two perineal prostatectomies, the Alexander and the Dittel, he thinks that the former is most thorough and satisfactory, but the Chetwood operation is, on the whole, the one that he recommends.

2. **Typhoid in Atlantic City.**—Marvel has studied the conditions and concludes that typhoid fever occurring in Atlantic City is not due to the water-supply or the milk-supply, but is probably an introduced disease.

4. **Inguinal Hernia.**—Hill favors a modification of the Halstead operation, leaving out the cut through the abdominal wall in cases with flabby musculature. He calls attention to certain points in the Halstead operation; first, the incision which is ordinarily made too low down, involving the loose tissues at the upper part of the scrotum. His own incision seldom exceeds 6 cm. in length, and its lower extremity corresponds very accurately with the location of the external ring, which is more quickly recognized by approaching it from above than below. The fibers of the external oblique aponeurosis are then separated to correspond with the length and direction of the incision in the skin, thus at once exposing the inguinal canal, the cord, a few vessels and the sac, covered by infundibuliform fascia. After this is divided, separation of the sac from the cord is accomplished with the utmost ease, and it is drawn up out of the scrotum until its ends are free. Thus gently separated, the oozing will be very slight, a ligature is rarely required, and subsequent ecchymosis seldom seen. He has only met with difficulty in two cases, both of which had previously been subjected to injections by persons claiming to cure rupture without the use of the knife. The method of managing the stump is an important one. It is important, he thinks, to have as complete removal of the sac as possible, and of every particle of slack peritoneum about the internal ring, leaving the visceral face of the internal ring as smooth as possible by amputating the sac high up within the abdomen and leaving no open passages or pouches of peritoneum to invite recurrence. A wet gloved finger is the best instrument for separating and loosening up the abdominal end of the sac, but roughness should be avoided. As the sac will often tear after

being opened, this should be deferred until separation of its inner extremity has been fully accomplished. He has used only absorbable sutures, catgut or kangaroo tendon, though he admits that excellent results have been obtained by others with non-absorbable ones. In the after dressing he does not like to apply collodion gauze directly to the wound, but leaves a little material there to absorb the oozing that may occur, and keeps the collodion at a distance of 1 to 2 cm. from the wound. This is preferable to leaving the gauze beneath the non-absorbable layer of collodion to act as a culture media for skin bacteria at the edges. The dressing should be removed for the first time in three weeks, unless infection occurs, and the patient should then be allowed to get up out of bed, and, as soon as he feels able, to return to his usual vocation.

5. **Hot Water for Vascular Neoplasms.**—For the last two years Wyeth has treated a number of cases of angiomas by injections of water of high temperature, 190 to 212 F. and over. The varieties of tumors thus treated are arterial angiomas (cirroid aneurism), capillary angioma, or mother's mark, and venous angioma or cavernous nevus. No accident has occurred in any of the operations, and the results have been such as to justify recommending the method. He employs a syringe with a metal cylinder and adjustable piston, with needles of varying size, and under ordinary aseptic precautions boiling water taken directly from the boiler is injected into the substance of the tumor. The quantity of water and temperature vary with the size and character of the neoplasm. In arterial and venous tumors of large size the needle is thrust deeply into the mass and from 30 to 60 minims of water are forced out. It is then withdrawn $\frac{1}{2}$ to 1 inch, and the operation repeated until the entire tumor is solidified. The water should be hot enough to immediately coagulate the blood and the arterial tissues, but not to scald and produce skin necrosis. When the tension is sufficiently great to cause a slight bleaching of the integument the injection should be discontinued in that area. In treating capillary nevi or mother's marks of important structures, like the eyelid, nostrils or margin of the lip, a small instrument with a delicate needle should be employed and water a little below the boiling point (about 190) is preferable. Not over two to six minims should be injected in a single puncture, and the treatment should start from the various parts of the periphery, the operator watching closely the effect of the first injections, and after a week or ten days repeating them as may be indicated. Water at a very high temperature is apt to produce sloughing in the capillary variety. In cirroid aneurism, and the large cavernous nevi the water should be boiling and kept at the boiling point while the instrument is being used. For this purpose he advises a long metal instrument, beneath the barrel of which a Bunsen burner is held while the operation is being done. In this way the high temperature of the water is maintained in the syringe. The operations are performed under complete narcosis, and in no instance has there been any painful symptom or septic reaction, with the exception of a single case which passed from observation a few days after the injection and later became infected from a superficial eschar. Suppuration followed, but the general good results were the same as in the other cases. He illustrates his paper with a case, and advises special caution in treating angiomas of the scalp and neck, on account of edema. Not more than five or six ounces should be used in case of cirroid aneurism of large size situated on the parietal bone.

6. **Congenital Hip Dislocation.**—The Lorenz method of treating congenital hip dislocation with special reference to the function of the weight-bearing use of the limb is described by Ashley, one of Lorenz's assistants. The details are too elaborate to be reproduced, but special importance is laid on the functional weight-bearing of the limb as affecting the prognosis. Lorenz believes that the child that walks for nine months with the limb in a stable position, stimulated by use, will have a much better chance than the one who refuses to walk. In double congenital dislocation the child can not walk, but she is allowed a rolling chair and can push herself around, propelling the chair by striking the toes on the floor, thus bringing the limb into activity.

7. Femoral Hernia.—Fowler points out the differences between femoral hernia and psoas abscess, varix, etc., and describes a modification of Fabricius' operation as practiced by Prof. G. R. Fowler. In brief it is given as follows:

1. The incision is planned so as to expose the insertion of that portion of the aponeurosis of the external oblique known as Poupart's ligament, at the spine of the pubes, and the line where that structure blends with the fascial structures of the thigh, as well as the sheath of the vessels at the crural opening.

2. The sac of the hernia is exposed and cleared to its neck.

3. The sac is opened and emptied, after which it is ligated at its neck, and the latter, in suitable cases, is inverted toward the abdominal cavity.

4. The edge of the aponeurosis of the external oblique is forced backward to the level of the upper margin of the horizontal ramus of the pubes, and there sutured to the periosteum and the origin of the pectineus muscle. By this means the space between the bone and the downward projection of the aponeurosis, in which space a femoral hernia forms before making its appearance externally, is obliterated.

The more elaborate technic of the operation is described at length.

8. Edward Jenner.—Dock finishes in this issue his article on Jenner, pleading at the close for a return to the Jenner principles in vaccination, insisting on training and expertness in the operators, the assurance of reliable and safe vaccine material and the necessity of revaccination.

10. Appendicitis in the Female.—The subject of Deaver's article is the connection of appendiceal inflammation in the female, with involvement of the adnexa, and he points out the ways in which this may occur. The symptoms of pyosalpinx due to appendicitis are those of appendicitis in the pelvis, followed by dysmenorrhea and irregular menstruation, sometimes leucorrhea and other symptoms of unilateral pyosalpinx without the indurated feeling of the vagina. There is also no history indicating a gonorrheal infection. The treatment will depend on the location of the pus and the condition of the pain. When the abscess is high enough in the pelvis to be reached by incision in the loin, reflecting the peritoneum from the iliac fossa, it may be opened and evacuated from its lower limits, and washed out and packed with gauze. This operation is advocated only because of the size and situation of the abscess and the infectious nature of the appendiceal pus, which may render complete operation more hazardous. Its scope is necessarily limited, and he has several times had to give up the attempt and open the parietal peritoneum after all. This is especially the case when the appendix, while pointing into the pelvis, is well to the median line, and the great omentum, endeavoring to aid in the formation of a protecting barrier, becomes infiltrated and simulates a mass. In desperate cases of anemia and sepsis the abscess may be evacuated by drawing the cervix well forward or backward and incising the posterior vaginal vault thoroughly, opening the peritoneum, and evacuating the pus; irrigation should not be practiced, and the cavity simply drained with gauze. This is a sort of last resort. Opening of a pelvic abscess due to appendiceal disease is a much more serious matter than the same operation for abscess due to tubal or uterine infection. Pus in the appendix is of virulent nature, and care should be taken to avoid spreading the infection.

11. Vaginal Section in Pelvic Suppuration.—Vaginal incision should be the operation of election, according to Montgomery, when the pelvis, and especially the retrouterine pouch, is the seat of a large collection of pus whether secondary to tubal disease or pelvic hematoma. It should be the only method contemplated when the condition of the patient is so precarious that a severe operation can not be considered, and in such cases should be confined to incision and drainage, leaving radical measures for the future. When the ovaries and tubes are so completely destroyed as to render their retention a menace, the experienced operator will prefer it. He describes the technic:

As a preliminary to the operation, the bowels should be thoroughly evacuated and the lower bowel cleansed by frequent enemas. The vagina should be scrubbed by gauze-wrapped fingers, using first a solution of creolin 7.5 cc. (5ij), tr. sapon. virid. 60 cc. (3ij) to a quart of hot water, followed by the same process with sterile water, and finally with alcohol. With a gauze sponge the vagina and vulva are wiped dry, the cervix seized with a double tenaculum and held forward, the perineum retracted and an incision with scissors or knife made through the posterior vaginal fornix to evac-

uate retro-uterine collections. The cavity is thoroughly irrigated with a hot normal salt solution, and a careful examination made of the pelvic viscera. The tubes and ovaries are easily traced; if either are sacculated they can be readily incised and their contents emptied. The exposed cavity should be thoroughly packed with iodoform gauze. When the distended tubes are not prolapsed they can often be more readily reached through an anterior incision. Through such an opening the fundus uteri can be turned down, the inspection of the ovaries and tubes secured, and proper treatment of diseased conditions instituted.

While he drains less frequently than formerly in abdominal operations he is confident that gauze drainage in the vagina makes convalescence more rapid and the after-results better.

After the incision, anterior and posterior, the fundus is turned forward, and the ovaries and tubes reached over the fundus. This position puts the broad ligament upon a stretch and permits its course to be followed readily so that adhesions of tube and ovary can be easily recognized and torn off with greater ease than when proceeding from above. The uterine arteries are easily seen and can be secured by pressure forceps. The upper part of the ligament should be ligated with chromic catgut. The uterine arteries are likewise ligated and the pelvic cavity packed with iodoform gauze.

The procedure can frequently be greatly expedited by employment of the method introduced by Landau and so extensively practiced by Pryor, which consists in the bisection of the uterus and the removal of the separate halves, which affords additional room for easy manipulation. When the suppurative condition is complicated by the presence of fibroid growths the latter can be enucleated and the size of the mass thus reduced.

The advantages of the vaginal section are: 1. It is regarded as a less serious operation by the patient, who will consequently consent to it at an earlier date, when the chances for her recovery without a sacrificial operation are much more probable. 2. The patient experiences less pain and discomfort, her convalescence is more rapid and she bears on her body no marks of the procedure.

12. Pelvic Bone Necrosis.—The different forms of pelvic suppuration due to disease of the pelvic bones are noticed by Wilson, who speaks particularly of the later effects of infantile Pott's disease on childbearing women. He remarks that the more or less common backache of pregnant women is often in reality the cry for relief of the overburdened spine that had recovered from tuberculosis in childhood, and pregnancy may set up a sort of recrudescence of the early disease. Sacroiliac disease is noticed at length as making more trouble for diagnosis and the more unfavorable prognosis on account of the late period of its recognition. He protests against the prevalent idea of the hopelessness of tuberculous bone disease, which has done more to interfere with complete recovery by postponing rational treatment than anything else.

13. Drainage in Pelvic Disease.—As a general rule drainage is becoming less and less used with greater experience and skill in technic. The complicating conditions which modify this rule in pelvic diseases are abscess in the adhesions, lymph surrounding the affected organs, and the acuteness of the infection, especially the latter. We should consider, however, that pus which is to-day virulent and almost certain to infect the operative wound, may next week be handled with impunity. Acute suppurations of the pelvic organs, either gonorrheal or puerperal, should be allowed to advance as far into the sub-acute stage as is permissible with the safety of the patient before operation. In cases of gonorrheal infections, this advice is safe for any operator to follow, but may be dangerous in respect to puerperal infection. Every case, however, must be studied on its own merits, and when in doubt the decision is generally against drainage. Suppurative disease of the pelvis, such as puerperal abscesses (intrapertoneal), suppurations in the pelvic connective tissue (broad ligaments, etc.), pus in the pelvis as the result of bone or joint necrosis, will always demand drainage, and the sooner established the better. In the first two diseases vaginal drainage is safest and best. Vaginal operations always demand a higher percentage of drainage than other operations, and it is one of the greatest objections to this route of operating. Baldy considers that he drains not more than 5 per cent. of his cases. The temperature and pulse will have to be largely relied on, together with the knowledge that the case is one that might demand drainage. He speaks of the possibilities of infection through the drainage tube, and says that surgeons who dispense with drainage rarely or never see a fistula or infected ligatures. The risks of pelvic surgery are reduced to a minimum, and the best interests of the patient subserved when the drainage tube is dispensed with, especially since it is true that if an error of judgment has been committed the mistake is so readily and safely corrected.

14. **Abdominal Cases.**—The cases reported by Peterson are of splenectomy, Cesarean section, puncture of ovarian cyst, and myomectomy in a pregnant woman.

15. **Abortion.**—Marx discusses the subject of abortion. He speaks of lues, which he considers the most prolific cause, next of the toxemia of pregnancy. He understands by this a total and progressive diminution in the daily excretion of urea without evidence of more than a functional renal lesion, accompanied or not by symptoms of constitutional poisoning. There is a difference, however, in individuals in regard to the amount of excretion of urea; it is just possible that certain women excrete habitually a minimum amount, and this might lead to error. If a patient with a history of repeated abortions presents herself with absence of other disturbing conditions, we should estimate the urea from a 24 hours' specimen. Should this fall much below the average, whether there be systematic symptoms present or not, we must consider this a causal factor in the production of the abortions. These patients must be kept in bed and treated accordingly, until the urea estimate is increased up to and above the normal. Endometritis and allied conditions and complications are also important causes, as well as uterine displacements. For the latter Marx condemns abdominal fixation methods as most reprehensible during the childbearing period. The uterus should be suspended freely and not fixed.

17.—See abstract in THE JOURNAL of October 4, p. 857.

19. **Volvulus.**—Erdmann discusses Gibson's statements in the *Annals of Surgery*, Vol. xxxii, and reports three cases. He remarks on the difficulty of diagnosis in cases of obstruction and the special points indicating volvulus, such as slowness of onset, lack of shock, age of the patient, distension of the abdomen outlined in the coils of the intestine. The high mortality in Gibson's cases when the small intestine was involved is noted, and he remarks that it can only be theorized on. Possibly the great sympathetic supplying the small intestine shares the major portion of the responsibility by inducing a more profound degree of shock. He also asks the question, how many of Gibson's cases were subjected to an artificial anus, as in modern surgery the mortality rate is less in primary excisions of gangrenous small intestine than in those cases where an artificial anus is made in the small intestine. His own cases are given in detail.

20. **Unusual Larval Parasites in Man.**—The species here observed are those supposed to be the *Tenebrio obscurus*, which was ejected by a colored man by coughing, though probably from the esophagus or stomach, and the *Hypoderma bovis*, which was found under the skin of a white boy.

22. **Methylene Blue and Quinin in Malaria.**—Moore and Allison have experimented with these drugs and give the results in detail in tabulated form. Their conclusions are:

1. Methylene blue will destroy malarial parasites in many cases, but is less certain than quinin.
2. Methylene blue is probably most valuable in chronic cases, but has no advantage over quinin.
3. The effects are ordinarily more unpleasant than quinin.
4. It is useful in cases that can not take quinin on account of some idiosyncrasy to it. Its use in cases of pregnancy is undetermined.
5. It is probably valuable in treating hematuric and hemoglobinuric fevers on account of its diuretic action; this has yet to be determined. We have had no chance to test its use in such cases.
6. We believe that quinin is quicker and much more certain and would rely on it rather than on methylene blue.

25. **Sterility.**—The point made by Polk is the extension to the condition of sterility of an accepted procedure. He reports from the literature cases where operations on the adnexa, leaving them apparently in a badly mutilated and non-functionating condition, were nevertheless followed by restoration of function and pregnancy. In one case reported by Baer the appendages on the left were removed entirely, those on the right having been dissected from their adhesions, were in shreds, the tube having been torn off about two inches from the uterus. Fifteen months later the patient gave birth to a child. In another case reported by MacMonagle the right appendages were removed, the ovarian vessels on both sides were ligated and ligatures placed around the left appendages, which were connected with a pus cavity discharging through the rectum. A portion of both

the left appendages had to be left in the stump for anchorage. Three years afterwards the woman gave birth to her first child. He refers to other cases and reports one of his own and emphasizes the possible value of freeing the ovaries and tubes from adhesions in its effect on the subsequent function of the organs. As much normal ovarian tissue is to be left as the diseased conditions will warrant and he would give the ovaries the benefit of the doubt in dubious cases. If the uterus is displaced backwards it should be approximated to its normal position, preferably by shortening the round ligaments. The main point is that where sterility is the leading complaint and perhaps the only one, and the difficulty lies in the condition of the appendages, much can be done for its relief.

26. **Spinal-Cord Tumors.**—Spinal-cord tumors are much more difficult to diagnose than those of the brain, and, as generally understood, they include not only those of the cord itself, but anything that encroaches on the cord, or interferes with its function and anatomy. It is important to distinguish intradural, extradural and intramedullary growths, but Collins finds this distinction can only be approximate. Until recently it was supposed that intramedullary tumors were hopeless, but Abbe has recently published a case where the removal was done successfully. Nevertheless it may be said they are still virtually beyond surgery. Collins reviews the symptoms of spinal tumors, pain, disturbance of the tactile sensibility, motor symptoms, spasticity, with later paralysis, exaggeration of the reflexes, visceral symptoms, and muscular atrophy and bed sores as late manifestations. These symptoms are inconstant and in a measure depend on whether the tumor is intra- or extra-medullary. The main difficulties in the diagnosis of spinal cord tumors are to determine where the tumor is in relation to surrounding structures, that is, whether intra- or extra-dural, and at what segment of the spinal cord it is situated. In intramedullary tumors the paraplegia is usually not so complete, but the great point in the diagnosis between the two forms is pain, which in intramedullary tumor is rarely an initial symptom, but is almost invariably so in tumor of the meninges and often severe. A study of the anesthesia must be made to determine the locality of the tumor and the tendency is to locate it too low, therefore an opening should always be made at the upper end of the supposed tumor, and if not found, a further opening should be made in an upward rather than in a downward direction. The consensus of opinion seems to be that the location of the tumor in the cord is from two to four inches above the uppermost limits of the anesthesia, more often the higher than the lower limit. The widespread area of pain is often confusing, and it must be taken in connection with other localizing symptoms. Intradural tumors are nearly twice as common as extradural ones. The latter may exist a long time without giving rise to symptoms, while the former very early produce symptoms. The favorite location is the dorsal region, the lower and upper ends. Thirty-five of the 70 cases analyzed in this paper were in this region, 15 in the cervical, 13 in the lumbar and sacral, and 6 of widespread distribution. Collins reports 2 cases at length and discusses the statistics and results of the operations. He finds that operation is growing in favor, and when one considers the hopelessness of these cases under medical treatment, it is readily seen that surgical interference is the only hope. The results already obtained prophesy still better success in the future and the importance of early operation is emphasized. If recovery does not occur in two or three months after treatment a further improvement may hardly be expected. Immediately after the operation, however, a temporary accession of paralytic phenomena not due to changes produced in the cord by the tumor itself, but secondary to the trauma of the operation, appears in many cases. While the surgery of the spinal cord offers a very attractive field, still the inadequacy of surgery is very manifest. The operations are as prolonged as formerly, the loss of blood is great and sepsis is about as frequent as ever. Therefore, we can not yet say that the majority of spinal-cord tumors can be operated on with success. The latter part of Collins' paper is devoted to a recapitulation of the published cases in the literature.

27. **Yellow Fever.**—Doty replies to an article written by Dr. Carter of the Marine-Hospital Service holding that vessels are secondarily infected with yellow fever. He criticizes Carter's conclusions mainly on the ground that they are not derived from his personal observation, and, therefore, are not conclusive.

28. **A New Diphtheria Bacilli Stain.**—Schausler has improved on Piorkowski's method of staining by substituting pyronin (Grübler) for eosin. The solutions used for making the stains were as follows:

Filtered solution Löffler's methylene blue.....	10 c.c.
Filtered solution pyronin (Grübler).....	1.5 c.c.
{ Pyronin, 0.5 gram. }	
{ Aque dest. 10.0 c.c. }	
Three per cent. HCl-alcohol.....	0.5 c.c.
{ Alcohol absol. 97.0 c.c. }	
{ HCl. (25 per cent.) 3.0 c.c. }	

To prepare specimen: 1. Make cover-glass smear and fix by passing through a flame three or four times. 2. Drop on to a fixed smear enough solution to cover it and let it stand one minute. 3. Wash thoroughly in running water. Mount in Canada balsam and examine with 1-12 oil immersion lens. Magnify 1,000 times.

The above procedure will show the bodies of the bacilli stained blue while the poles are a bright ruby red.

Pseudo-diphtheria bacilli are smaller and take on only a blue color. The bacilli of Asiatic cholera and plague, when stained by this method, show granular bodies in their interior, but these bodies are not metachromatic like those of the diphtheria bacilli described.

30. **The Phloridzin Test.**—Phloridzin is a drug from which glucose is separated in the course of its passage through the body, as shown by the presence of sugar in the urine after its administration. It is perfectly harmless and shows that under normal conditions the two kidneys have equal functional capacity. Watson and Bailey have experimented with this test, their studies going over a period of seven months, using subcutaneous injections of phloridzin to estimate the average amount of sugar eliminated within a specified time after administration; the rate of the sugar excretion; the effect of ether anesthesia on the renal function, and the value of phloridzin as compared with that of the ordinary methods of urinary examination. The general results of their experimental observations are a confirmation of the claims made for the value of the phloridzin test. When studied in relation to the individual cases, however, certain contradictions and defects became apparent. They find that the average quantity of sugar eliminated in the first half hour after the administration of the drug subcutaneously when the kidneys were normal, was about 45 per cent.; and that the first half hour's elimination is greater than the second half hour's by about .06 per cent. When renal disease exists, the first half hour's quantity of sugar eliminated is, for a series of cases, about one-half as much as that when the kidneys are normal, and there is little difference between the two half hours. The effect of ether anesthesia is to stimulate the kidneys to greater functional activity, but the renal function is not, as judged by the phloridzin test, in any way impaired by the anesthesia. This is true only when the kidneys are normal; when they are diseased, ether fails to stimulate them. There is, moreover, relatively much less sugar eliminated in the first than in the second half hour after phloridzin has been given than is the case when the kidneys are sound, judged by the average results. In a series of cases taken collectively the phloridzin test gives accurate indications of the condition of the renal function and of the existence of renal disease. In a certain number of individual cases, it even appears to be more delicate and discriminating than the ordinary urinary tests, but the relatively large number of instances in this series of observation, in which the reverse of this is true, shows it to be too variable to be trustworthy.

31. **Cryoscopy.**—The method of cryoscopy is described by Bailey. The urine must be obtained by means of the urethral catheter, the blood by a small trocar inserted into one of the prominent veins of the arm, and collected in a perfectly clean test tube. The freezing point is determined by the use of a freezing mixture of cracked ice and salt in which a large glass cylinder or test tube is inserted. This is the receiver for a

smaller test tube, which is to contain the blood or urine, kept from contact with the walls by means of a cork and a rubber band about the bottom of the smaller tube. The thermometer is suspended in the smaller tube through the stopper. A sufficient amount of blood or urine is put in to completely cover the bulb of the thermometer. The liquid should be stirred occasionally and the layer of ice and salt mixed by means of a wire or spiral passing through the stopper. The mercury will first fall to a point where it remains for a short time stationary, after which it will rise to a permanent level—the freezing point. The whole test should take not longer than fifteen to twenty minutes. To briefly summarize, Bailey says:

The results of cryoscopy in renal disease, as reported in the different foreign medical journals, would appear to be of the greatest value, and if by further work in this line its value receives additional corroboration, the surgeon of the future will have a means of diagnosis which will be invaluable in all prospective operations on the kidneys.

32. **Pleurisy in Typhoid.**—Sears reports a case and remarks on the complication, which seems to be one of the rarer ones. It is most common after the first week, while the temperature is still high, but may be delayed until convalescence or even relapse. It may show itself by the usual symptoms of pleurisy, but more frequently its onset is insidious and its presence is only discovered on physical examination. The typhoid bacillus has been demonstrated as the cause in a considerable proportion of cases.

41.—This article has appeared elsewhere. See THE JOURNAL of December 13, p. 1551.

42. **Gliomatosis.**—Eshner first gives a classification of the conditions of the morbid cavities of the spinal axis and their causation, and reports a case which he considers to be one of gliomatosis or syringomyelia of the cervical type. The symptoms had a tendency to unilateral prominence and indicated also involvement of the bulbar nerves.

43. **Gallstones.**—Kerr offers the following deductions: That gallstones are more frequent than commonly supposed, and many cases of supposed chronic stomach trouble are their victims. Tenderness at a point half-way between the right costal cartilage and the umbilicus, elicited either by gentle pressure or by a gentle punch is important as a diagnostic symptom of cholelithiasis or cholecystitis. A proper regulation of hygiene, diet containing a large percentage of albuminous or nitrogenous food, abundance of outdoor exercise, and the use of plenty of water are the best prophylactic measures. The rational treatment of gallstones (after they have formed) is their removal by surgical measures, as no internal medical treatment can be relied on. There is an analogy to some extent between the gall-bladder inflammation and appendicitis; the best time to operate is after the acute attack has subsided, unless septic symptoms demand immediate intervention. The x-ray is not as valuable in locating biliary calculi as it is in diagnosing stones in the kidneys. Cholecystectomy is more in favor than formerly, and the results reported have been rather good.

44. **Nephritic Eye Lesions.**—There is no vascular structure of the eye that can not be affected in kidney disease, neither the retina, conjunctiva, uvea nor the lids. The external muscles also may show pathologic signs directly or indirectly attributable to the nephritic condition. Swelling of the eyelids, particularly the lower ones, is also suggestive of renal trouble. Chemosis or swelling of the conjunctiva is sometimes observed, and when unaccompanied by severe local inflammatory processes, should lead to careful examination of the urine. Recurring subconjunctival hemorrhages in persons over 40 should be considered suspicious, and Nance thinks it is a matter of some importance. Primary iritis occurs in a number of cases, and where no syphilitic or rheumatic history can be clearly demonstrated, renal disease may be looked for. Paresis of the several extrinsic ocular muscles, due to sclerosis of the nerves, or to a hemorrhage at their origin is not infrequent. Diminution in the power of accommodation in those past middle life, requiring frequent change of glasses for new work, is a symptom of well-advanced kidney disease. There is a possible connection between catarrh and kidney disease, though it is not

yet decided. The most important lesions, however, are the intraocular ones demonstrable by the ophthalmoscope, albuminuric retinitis. This never appears until the disease is well advanced and indicates a very unfavorable prognosis. Uremic amaurosis is sometimes confounded with albuminuric retinitis, but differs clinically from it so as to be easily recognized. It is more commonly met with in acute nephritis, though it may occur in exacerbations of a chronic condition.

45. **Paralysis and Damage Suits.**—The point insisted on by Aldrich is careful examination by the examining surgeon, with which he maintains it is impossible for a simulator to succeed.

47.—See abstract in *THE JOURNAL* of November 1, p. 1132.

50. **Tetanus.**—Sweetser remarks on the mortality of tetanus under the ordinary treatment, and reports two cases. The first was one of short incubation and acute development treated by antitetanus serum with chloral and morphin and resulting fatally. The second was that of a girl fourteen years of age who had had an operation for ovarian cyst which had been preceded by a vaginal examination, which he thinks introduced the bacillus into a wound or abrasion. The case was an acute one, but the incubation was rather long, thirteen days. The treatment was morphin during the acute stage to control the pain, $\frac{1}{4}$ gr. doses every four hours, antitetanus serum, which seemed to him ineffective, bromids and chloral. On the fifth day veratrum viride was tried, in addition to gelsemium, with remarkable effects on the convulsions. The vomiting was severe, and the doses were reduced from 8 minims of Norwood's tincture and of the fluid extract of gelsemium to 6 minims every four hours and then every five hours. He then returned to chloral and bromid, but the bad conditions recurred so that the veratrum viride and gelsemium were discontinued and increased. The patient made a good recovery. In the ten days about 17 drams each of Norwood's tincture and of fluid extract of gelsemium were given per rectum, with no effect on the cerebrum and no general depressing effect on the system, this being in marked contrast to the chloral. He reviews the different remedies and their effects, and states that the points which he wishes specially to emphasize are the recovery of a severe case under this treatment, the use of remedies which affected the anterior horns of the spinal cord in directly the opposite way from tetanus toxin, and to call attention to the fact that chloral is a dangerous drug, which is more likely to poison the system in this disease than even in health. To record also the opinion, based on observation, that some of the deaths ascribed to the tetanus poison have really been due to the effects of the remedies used.

52. **Formaldehyd in Diphtheria.**—The treatment here recommended by Donaldson is fumigation of the patient's room by burning either tablets or candles of formaldehyd in the adjoining closet, leaving the door open long enough for the escape of gas into the room or, in preference to this, when possible, to fumigate a room and transfer the patient to it and then fumigate another room and transfer the patient back, one room to be used during the day and the other at night. He tabulates seven cases thus treated, five of them of the ordinary type and two mild, with good results. These are not considered numerous enough for definite conclusions, but are of value as of sufficient importance to report with the hope for a further investigation of a remedy which always holds an important place in the treatment of the disease. He does not say just how much of the gas was allowed in the room, but, of course, the air must have been respirable.

55.—See abstract in *THE JOURNAL* of August 9, p. 329.

57.—*Ibid.*

62. **Myopic Eyes.**—Heine has examined myopic and emmetropic eyes extracted after death, with special reference to the condition of the ciliary muscle and optic nerve entrance. He also has compared them with the eye of the pigeon, which has a different arrangement of muscular fibers. He found that the ciliary muscle of the myopic eye may have a form generally supposed to be found only in hyperopia, and also found a decided difference in the optic nerve entrance. In emmetropic

eyes the nerve fibers run almost directly forward until they reach the lamina cribrosa, when they curve outward and then inward, to enter the retina. In the eye with 10 D. myopia, the fibers of the nasal half of the nerve ran almost straight to the lamina cribrosa and then turned sharply to the temporal side for some distance before turning again to enter the retina, the choroid and the retina being here displaced temporarily over the sclera and lamina cribrosa. In the eye with 15 D. myopia the displacement was still more marked and farther over the disc. The pigment epithelium, however, extended almost to the axis of the optic nerve.

63. **Chestnut-Burr Thorns in the Cornea.**—Meding reports a case where a child had a chestnut burr fall on the eye and eight thorns transferred to the cornea, the points projecting into the aqueous chamber within a very short distance of the iris and lens. An attempt was made to remove one of the thorns, and it was found that the slight pressure made on the cornea brought the thorn points into contact with the iris and lens, and the attempt was unsuccessful. Dr. Herman Knapp advised atropin, rest, and no surgical interference whatever. The advice was followed, with the result that the thorns gradually loosened by slight ulceration about the base of each, and were extracted or absorbed, leaving only three scar points, two so tiny and faint as to escape any but careful scrutiny, one somewhat larger and denser, the latter at the point of attempted removal. He remarks on the aseptic nature of the thorns, the curious tolerance of the cornea, the general absorbent powers of the aqueous for vegetable matter, and the wisdom of retaining thorns as plugs for the holes they made, thus preventing infection; a hint of wide application.

64. **Sympathetic Ophthalmia.**—Gifford reviews the theories of sympathetic ophthalmia, favoring the germ theory and in support of Berlin's assumption of the existence of germs especially adapted for growth in the tissues of the eye. He mentions, as analogous, the peculiarities of the trachoma germ, which affects nothing else than the conjunctiva or possibly the lachrymal sac. In case of sympathetic ophthalmia, however, it is not necessary to assume the existence of a germ especially adapted by nature for growth in the tissues of the eye. The rarity of the disease and the fact that it is practically incapable of propagation from case to case speak against the assumption; but it may be that various species of microbes, after growing within the eye for several days or weeks, may, by a process of natural selection, acquire a certain specific adaptation to the uveal tract, so that, on being carried to the second eye by the blood current, they find there conditions most favorable to their development.

66. **X-Rays in Cancer.**—Robinson's address covers the subject of the treatment of malignant disease with the Roentgen rays, which he considers a very valuable addition to our armamentarium, and says that some cases of advanced epithelioma are incurable otherwise. Many of the cases cured and regarded as inoperable by other means could have been quickly cured in an early stage of the disease, hence physicians should devote proper attention to this disease. The majority of cases so far cured could have been more quickly cured by the knife or caustics, especially the latter. In cutaneous cancer the scar is sometimes better after the ray treatment than after the use of caustics, but, as a rule, caustics are preferable, as their action is definite and there is a saving of time in their use. In cases of cutaneous cancer the rays are a valuable adjunct of other methods, and when the disease is situated around the important blood vessels, it is the only method to employ, except in some cases of disease of the extremities, when amputation should be advised. All cases of mammary carcinoma, except those seen in a very early stage, should be treated by the ray treatment before resorting to the knife, and the rays should also be used in all inoperable cases, and in all cases after amputation has taken place. According to our present knowledge, ray treatment is not curative in internal cancer of any part of the body. To obtain the best results in all cases, there must be no fault in the technic of the operation in order to avoid a serious burn and obtain the desired action on the cancer tissue.

68. Paralysis of the Bowel.—A new sign mentioned by Peters is conduction of the heart and respiratory sounds over the whole bowel in case of paralysis with abdominal distension, associated with inflammatory conditions. This special conduction is not present nor is it met with in distension due to ascitic fluid or tubercular fluid unassociated with acute inflammatory conditions. The facts are: 1. The heart and breath sounds are not heard over the abdomen during health, at all events not below the area of the stomach. 2. They are not heard in non-inflammatory conditions of distension. 3. Their prominence in inflammatory conditions is greatest when the gurgling sounds of peristalsis are entirely absent. The inference is that the condition responsible for the phenomenon is paresis or paralysis of the musculature of the bowel wall due to the inflammatory disturbance. It is, therefore, submitted that if these observations are verified, the sound is a valuable one in the diagnosis of paralysis of the intestines, and has a somewhat important prognostic significance, especially if the paralysis is due to sepsis, as is usually the case.

75. Pistol Shot Wounds.—LaGarde publishes the results of experiments with the Luger and Colt's automatic pistols in use in the Army, and concludes that their stopping power is hardly sufficient, and that surgeons should be guarded in their recommendations of such firearms as efficient military weapons in savage warfare.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal (London), November 29.

- 1 *Atonic Motor Insufficiency and Dilatation of the Stomach: Their Causes, Diagnosis, and Treatment. Robert Saundby.
- 2 *Hair-Balls and Other Concretions in the Stomach. W. Soltau Fenwick.
- 3 *Dyspepsia and Its Treatment by Antiseptics. Guthrie Rankin.
- 4 On Four Cases of Perforating Gastric Ulcer, of Which Three Recovered. Robert Jones.
- 5 Operations for Gastric Ulcer, Acute and Chronic. Rushton Parker.
- 6 Natural History and Pathology of Pneumonia. W. Hale White. (Abstract.)

Archiv f. Gynaekologie (Berlin), lxvi, 3.

- 7 *Ueber Microorganismen des Vaginal-Secretes Schwangerer (of pregnant women). H. Bergholm.
- 8 *Deportation of Chorionic Villi. W. Poten. Die Verschleppung der Chorionzotten.
- 9 *Einiges aus Geburtshilfe und Gynaekologie des Aetios von Amida, A. D. 540. M. Wegscheider.
- 10 Fall von acutem Hydramnion bei eineligen Drillingen. J. v. Braitenberg.
- 11 Zur Kenntniss der Kraurosis Vulvae. W. Darger.
- 12 Ueber gleichzeitiges (simultaneous) Bestehen von papillären Adenomen in Niere (kidney) und Uterus mit Metastasen-Bildung. F. Voigt.
- 13 *Beitrag zur Etiologie der Hydrorrhoe gravidarum. G. Fleck.
- 14 *Zur Etiologie, Diagnose und Therapie der extrauterinen Gravidität. R. v. Braun-Fernwald.
- 15 (Vol. lxvii, No. 1.) Zur Pathologie des Ligamentum rotundum uteri und des Processus vaginalis peritonei. W. Vassmer.
- 16 *Weitere Erfahrungen (further experiences) über Ureterfisteln und Ureter-Verletzungen (injuries). W. Stoeckel.
- 17 Caesarean Section in Finland. G. Heinrichs.—Fall von Kaiserschnitt nebst Mittheilung über die in Finland ausgeführten Kaiserschnitten.
- 18 Ueber die Entstehung (origin) von Hymen-Cysten. R. Ziegenspeck.
- 19 *Placenta Previa. O. Strassmann.
- 20 Zur Frage des Beweiswerthes (value) der Lungenprobe (float-ing test). Haberdar.

Berliner Klin. Wochenschrift, to November 17.

- 21 (No. 41.) Zur Technik der Leucocyten-Zählung (counting). R. Breuer.
- 22 Ueber Sclero-Edem. A. Buschke.
- 23 Lactophenin in 450 Cases of Typhoid. C. v. Schuler.—Erfahrungen über die med. Behandlung des Typhus abd. mit Lactophenin in 450 Fällen.
- 24 (No. 42.) *Cinnamic Acid in Tuberculosis of Lungs and Larynx. H. Krause.—Zur Behandlung der Lungen- und Kehlkopf-Tuberculose mit Hetol (Landerer).
- 25 *Ueber die Ursachen (causes) des primären Glaucoms. G. Levinsohn. (Commenced in No. 41.)
- 26 (No. 43.) Weitere Untersuchungen über Hemolyse im heterogenem Serum. P. Baumgarten.
- 27 *Zur Photographie des Augenhintergrundes (fundus of eye). W. Thorne.
- 28 *Ueber Flimmerscotom und Migrän. F. Jolly. (Commenced in No. 42.)
- 29 Untersuchungen (researches) über Streptococci und Anti-streptococci-Serum. H. Aronson. (Commenced in No. 42.)

- 30 *Rudolf Virchow's Unfall (accident) und Krankheit (illness). W. Körte.
- 31 (No. 44.) Rudolf Virchow. J. Orth (Virchow's successor in the faculty).
- 32 *Ueber den klin. Werth (value) der Ehrlich'schen Dimethylamidobenzaldehyd-Reaction. E. v. Koziczowsky.
- 33 Die moderne Localisations-Theorie in psychologischer Beleuchtung. E. Storch.
- 34 (No. 45.) Ueber Meningococcen-Septikämie. H. Salomon.
- 35 Romanowsky Stain for Sections of Cancer. L. Pinkert.—Ueber die Anwendung der R.'schen (Romanowsky's) in der Färbemethode in den Gewebsschnitten, welche die Krebsgeschwülsten. Ein Differential-Färbung der in den Krebsgeschwülsten vorkommenden einzelligen selbständigen Organismen.
- 36 (No. 46.) *Ueber locale Wärme-Application. A. Gross.
- 37 Bovine and Human Tuberculosis. M. Wolff.—Perlsucht und menschliche Tuberculose.

Deutsche Med. Wochenschrift (Leipzig), November 20 and 27.

- 38 (No. 47.) *Ueber Prurigo lymphatica. A. Buschke.
- 39 *Impf- (inoculation) Metastasen der Carcinome. L. Brieger.
- 40 *Zur Frage der Lymphoma malignum. J. Spjarny.
- 41 *Relations between Tuberculosis and Cancer. E. Aronson.—Beziehungen zwischen Tub. und Krebs.
- 42 Significance of Schueller's Cancer Parasites. H. Mohr.—Zur Bedeutung der S.'schen Krebsparasiten.
- 43 Ueber 2 Fälle von Oesophagus-Carcinom welche unter dem Bilde eines Aorten-Aneurysmas verliefen. R. Kuckein. (Commenced in No. 46.)
- 44 *Beitrag zur Behandlung des Emphysems. C. Israel.
- 45 Beitrag zur Casuistik der Atropin-Behandlung des Ileus. E. Gebauer.
- 46 Ueber Milch-Pasteurisirung in der Kinder-Praxis. A. Hipplius.
- 47 Soll der praktische Arzt sich ein Röntgen-Instrumentarium beschaffen oder nicht? Faulhaber.
- 48 (No. 48.) *Communicability of Bovine Tuberculosis to Man. R. Koch.—Übertragbarkeit der Rindertuberculose auf den Menschen.
- 49 Beiträge zur Chemie der Chloroform-Sauerstoff- (oxygen) Narkose. E. Falk.
- 50 Oesophagus-Carcinom welche unter dem Bild eines Aorten-aneurysmas verliefen. M. Litten.
- 51 Selective Work of Digestive Glands. L. Popielski.—Ueber die Zweckmässigkeit in der Arbeit der Verdauungsdrüsen.
- 52 Benignes Magen-Adenoma ex ulcere peptico. Albu.
- 53 *Zur Früh- (early) Diagnose des Icterus. J. Bouma.
- 54 Ueber Malaria in Ober-Schlesien. H. Weissenburg.
- 55 Yohimbin (Spiegel) ein neues Alkaloid, Specificum gegen Impotenz. M. Lewitt. Collective Review. (Commenced in No. 47.)
- 56 Ueber neurasthenische Neuralgien. P. Freund.

Monatsschrift f. Geb. und Gyn. (Berlin), xvi.

- 57 (October Ergänzungsheft.) *Die Indicationen zur künstlichen Unterbrechung der Schwangerschaft (interruption of pregnancy) wegen Nephritis. M. Hofmeier.
- 58 *Artificial Delivery on Account of Internal Diseases. F. Schanta.—Die Einleitung der Geburt wegen innerer Erkrankungen.
- 59 Die Hysterectomie in der Behandlung der puerperalen Infection. Fehling.
- 60 *Ibid. Leopold.
- 61 *Ueber Tuberculose des weiblichen (female) Sexual-Organes und des Peritoneums. J. Velt.
- 62 *Ueber Genital-Tuberculose. A. Martin.
- 63 *Ibid. J. A. Amann, Jr.
- 64 Die chir. Behandlung des Uterus-Carcinoms. E. Wertheim.
- 65 Congress Reports: Internat. Gynecology and Naturforscher.

Muenchener Med. Wochenschrift, November 11 and 18.

- 66 (No. 45.) Relations between Pigments of Blood and Plants. Nadine Sieber-Schumoff.—M. v. Nenck's Untersuchungen über den Blutfarbstoff und dessen Beziehungen zum Blutfarbstoff.
- 67 The Carbohydrates of the Albuminoids of the Serum. L. Langstein.—Die Kohlehydrate der Eiweisskörper des Blutes.
- 68 Zur Kenntniss der rhinogenen purulenten Meningitis und Cerebrospinal-Meningitis. T. Struppler.
- 69 Ueber Aristochin, ein geschmackloses (tasteless) Chinin-Derivat. H. Stursberg.
- 70 *Ueber den Wert (value) der Cryoscopie zur diagnose des Todes durch Ertrinken (death from drowning). Revenstorf.
- 71 Zur Vermeidung (avoidance) der Hematom-Bildung nach Küstner's suprasympophysärem Kreuz-Schnitt (sacral incision). K. Heil.
- 72 Fall von croupöser Pneumonie und Sepsis, hervorgerufen durch den Pneumo-bacillus Friedländer. E. Philipp.
- 73 Fall von leutischer doppelseitiger Posticus-Lähmung (paralysis) mit Ausgang in Heilung. F. Steinhaus.
- 74 Fall von Lobar-Pneumonie mit consecutivem Pemphigus acutus, bei einem 2½ Jahr. Kinde. O. Moos.
- 75 Stichwunde (stab wound) in der Niere (kidney). Tubenthal.
- 76 Fall von congen. Diabetes insipidus kombiniert mit nach Insolation hinzugegetretener Epilepsie. Lichtwitz, Jr.
- 77 (No. 46.) Ueber Serum-Agglutinine. K. Landsteiner.
- 78 *The so called "Hardening" of Children. Hecker.—Die sogen. Abhärtung der Kinder.
- 79 *Cinnamic Acid in Tuberculosis. H. Riegner.—Einige Bemerkungen über die Behandlung tuberkulöser Erkrankungen mit zimtsaurem Natrium nach Landerer.
- 80 *Ueber Urethritis gonorrhoea bei Kindern männlichen Geschlechts. Fischer.
- 81 Abscess in Abdominal Wall Due to Fish Bone Perforating Intestine. A. Wagner.—Entzündlicher Bauchdeckentumor, etc., hervorgerufen durch einen aus dem Darm durchgebrochenen Fremdkörper.
- 82 Paracelsus und seine Reformation. K. Baas.

Zeitschrift f. Klin. Med. (Berlin), xlvii, 1-2.

- 83 Estimation of Nitrogenous Substances in Urine. R. v. Jaksch. —Ueber die Verwerthung der stickstoffhaltigen Substanzen im Harn des kranken Menschen.
- 84 Exp. Untersuchungen über Kohlenhydratsäuren (carbohydrate acids). P. Mayer.
- 85 *Serum Behandlung bei acutem und chron. Gelenk- (articular) Rheumatismus. Menzer.
- 86 Ueber die Resistenz der rothen Blutkörperchen (red corpuscles) gegen hypotonischen NaCl-Lösungen (saline solutions) bei Magenkrebs (gastric ulcer). G. Lange.
- 87 *Ueber spontane Leukosurie und Leukosaemie. H. Rosin and L. Laband.
- 88 (Nos. 3 and 4.) Ueber die experimentelle Erzeugung (production) von parasitären Myxomyceten Geschwülsten (tumors) mittelst Impfung (by means of inoculation) von Plasmodiophora brassicae. W. Podwysotski.
- 89 Ueber Einschlüsse (inclusions) in Blasen-tumoren. L. Michaelis and C. Gutmann.
- 90 Neuere Streitfragen (disputed points) aus dem Gebiet der Hematologie. A. Pappenheim.
- 91 Ueber Anticomplemente und Antilamboceptoren normaler Sera und path. Exsudate. II. T. Marshall and J. Morgenroth.
- 92 Ueber die chem. Zusammensetzung (composition) des chlorotischen Blutes (blood). F. Erben.
- 93 Fall von Adams-Stokes'schen Krankheit. B. Lewy.

Zeitschrift f. Orthopädische Chirurgie (Stuttgart), x, 4.

- 94 *Ueber die congenitale Hüft- (hip) Luxation. L. Heusner.
- 95 Ueber paralytische Luxationen. V. Martin.
- 96 Ueber Pes pronatus s. abductus und seine Messung (measurement). K. Nieny.
- 97 Fall von congen. Defect der Fibula rechts, verbunden mit congen. Luxation des Talus links. O. Schmidt.
- 98 Plattfuss (flatfoot) und Skoliose. S. Loebel.
- 99 Changes in Growth of Vertebrae After Spondylitis tuberculosa. O. Jalowlechl. —Ueber Wachstumsveränderungen an den Wirbeln nach Spondylitis tub.
- 100 Ueber die Valgus-Theorie Duchenne's de Boulogne. M. Van der Beek.
- 101 Ueber die Predilections-Stellen (points) der skoliotischen Abbiegungen (curvature) an der Wirbelsäule nach Beobachtungen an 1140 Skoliosen. W. Schulthess.
- 102 (Vol. xi, No. 1.) Die Neurogenen Skoliosen. A. Hoffa.
- 103 Principiellen in der Skoliosefrage. P. Bade.
- 104 Ueber Skoliose bei Halsrippen (with neck ribs). Garré.
- 105 Skoliosen-Behandlung mit Zuhilfenahme der Weir-Mitschell'schen Kur. Hoeftman.
- 106 Klinische Beobachtungen über Form-Verschiedenheiten (differences in shape) an 1137 Skoliosen. W. Schulthess.
- 107 Fall von congen. Hochstand (elevation) der Scapula. Froelich.
- 108 Laws of Static Weight Deformities. A. Schanz. —Die Bildungsgesetze der statischen Belastungsdeformitäten.
- 109 *Zur Funktions-Verbesserung (improvement) defecter Hüftgelenke (hip joints). A. Lorenz.
- 110 *Dauererfolge (permanent successes) des Redressements des spondylitischen Gibbus. O. Vulpius.
- 111 Ueber experimentelle Deformitäten. H. Maass.
- 112 Ueber das forcirte Redressement des Genu valgum. A. Codivilla.
- 113 Zur Behandlung des Genu valgum. Hoeftman.
- 114 Zwei Fälle von ischämischer Contractur der Hand-Beugemuskeln geheilt durch Verkürzung der Vorderarmknochen (cured by shortening the bones of forearm). Henle.
- 115 Apparate zur Retention des reponirten Schenkelkopfes (reduced head of femur) bei congen. Luxation des Hüftgelenks (hip joint). M. Schede.
- 116 Die klinische Etiologie des Plattfusses (flatfoot). J. Riedinger.
- 117 Zur Etiologie des congen. Klumpfusses (clubfoot). O. Vulpius.
- 118 Der Bau (structure) des Neger-Fusses. M. Herz.
- 119 Zur Casuistik des hysterischen Spitzfusses (talipes equinus). O. Vulpius.
- 120 Ueber Pes calcaneus traumaticus. A. Wittek.
- 121 Einige neuen orthopädischen Apparate. Heusner.
- 122 Die Circumferenz-Osteotomie. M. Reiner.
- 123 Ueber Spondylitis gummosa. Joachimsthal.
- 124 Permanent Results in Treatment of Congenital Dislocation of Hip. G. Drehmann. —Dauerresultate bei der Behandlung der angeb. Hüftluxation.
- 125 Early Massage in Treatment of Fractured Joints. G. Drehmann. —Ueber frühzeitige Massage-Behandlung einiger Gelenk-Fracturen.
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1. Stomach Dilatation.—Atony and dilatation of the stomach, according to Saundby, are much more frequent than generally supposed. The powder recommended by Dr. Eric Meinert of Dresden, containing 120 gr. of sodium bicarbonate and 90 gr. of tartaric acid, given in succession, dissolved separately in water, is much more effective in certain conditions than the old stomach powder of 15 to 30 grains of each. He thinks that dilatation is nearly twice as frequent in women as in men, and, according to the alleged causes, neurasthenia and dyspepsia seem to be the leading etiologic factors. He grades the cases as slight, marked and extreme; the slight where the greater curvature does not come below the level of the anterior

superior spine, below that line and half way to the pubis he calls marked dilatation, while anything lower than that he regards as extreme. If the greater curvature does not descend below the umbilicus he does not regard it as a case of dilatation. The various symptoms, pain, vomiting, loss of weight, constipation, flatulence, the condition of the tongue, etc., are noted. He concludes:

1. That atonic dilatation of the stomach is a common condition; that it occurs about twice as often in women as in men, and most frequently between the ages of 20 and 50, and that it is ten times more common than dilatation from obstruction, which generally occurs after 30 years of age. 2. That it is caused by neurasthenia or by any prolonged debilitating illness which may set up neurasthenia. 3. That there are no characteristic symptoms, and no correspondence exists between the amount of dilatation and the severity of the symptoms. 4. That the diagnosis can, in the majority of cases, only be made by the distension of the stomach by CO₂, evolved from 120 gr. of sodium bicarbonate and 90 gr. of tartaric or citric acid. 5. That the prognosis does not depend on the extent of dilatation, but rather on the duration of the symptoms, the general health of the patient and the effect of treatment. 6. The treatment must be mainly that of neurasthenia, supplemented by the use of such drugs and diet as may be indicated by complications, for example, gastritis. 7. Gastroenterostomy often fails to relieve these cases.

2. Stomach Concretions.—Fenwick says that concretions of vegetable matter are much less common than hair balls, and that stones or gastroliths are extremely rare and generally occur in men who have swallowed varnish or like substances. They are usually composed of hardened shellac. Hair balls are most common; there are 24 cases recorded. They generally occur in females, only one case in a male being reported. The youngest was 18 years of age, and the oldest 34 at the time of death. It never seemed to be associated with mental disease, and in several cases it was expressly stated that there was no hysteria or special emotionalism. In the majority of cases it originated in the habit of young girls holding their hair in their mouths while reading or biting the hair when excited. At other times it seemed to be due to the habit that some people have of filling their mouths with any substance with which they happen to be working or it might be due to some eccentricity of which the patient is herself unconscious. In one patient it was the custom to clean her comb with her fingers and then put the little bunch of hair into her mouth instead of disposing of it otherwise. Unless the concretions arrive at a considerable size the symptoms may be slight, if any, but as a rule, however, sooner or later intractable dyspepsia appears, the pain becomes localized to the epigastrium or left hypochondrium and is increased by pressure, and vomiting is seldom absent. Anemia is present, appetite variable, and breath offensive. Diarrhea and constipation alternate. There is a well-marked abdominal tumor often large enough to be visible through the parietes, sometimes globular or outlining the stomach. Its principal feature is its extreme mobility. The duration of the disease averages probably about fifteen years. In most of the recorded cases the concretion was mistaken for malignant growth, but the age and sex of the patient, the duration of the complaint and the physical characteristics of the tumor are the best guide against such errors. Malignant disease in early life is rapidly fatal, but concretions are accompanied for a long time by dyspeptic symptoms and seldom prove fatal in less than ten years. The character also of the tumor is different. If gastric symptoms are lacking there may be confusion with enlarged spleen, floating kidney or a fecal accumulation, and especially if the stomach happens to be dislocated. If the tumor is small it may be possible to bring it up with an emetic, but there is always some danger in this because of frequent secondary ulceration of the stomach or duodenum. Surgery is the only resort if the tumor is large.

3. Dyspepsia.—Rankin describes the acute, atonic, acid and nervous forms of dyspepsia, and gives a diet treatment for the chronic disorders: Breakfast: dry toast or stale bread with butter, milk and cocoa, a boiled or poached egg or white fish; luncheon: fish, fowl, or freshly-cooked meats, a little smoothly mashed potato or purée of vegetables, stale bread or toast, and some form of farinaceous pudding made with milk, or fresh stewed fruit, sweetened with saccharin. In the afternoon he would allow a little stale bread, or toast, with butter and milk or cocoa or tea infused in boiling milk. Dinner should be similar to luncheon, but in the early stages it is safest to forbid red

meat, substituting sweetbread, tripe, calf's head or game. Sleep is often promoted by bread and milk. If stimulants are taken at all, he would only give a little whisky, well diluted in one of the ordinary table waters after luncheon or a little light wine. In certain cases, especially the nervous variety, best results are obtained by giving the food in small quantities at a time more frequently repeated. He emphasizes that the mouth should be carefully inspected, and any decayed teeth attended to. In long-standing cases lavage of the stomach may be of advantage. For antisepsis he has found carbolic acid best. In atonic dyspepsia he finds that in most cases relief is afforded by the administration of a combination of dilute hydrochloric acid, pure carbolic acid, strychnin and ginger, followed by tonic drugs. The use of alkalies before meals to promote acid secretions is only attended with good results in mild and recent cases, and seldom succeeds so well as the acid method described. In acid dyspepsia alkalies are specially indicated, and should be administered two or three hours after food and in Rankin's experience are more efficient if combined with an antiseptic, of which bismuth is one of the best. He would give bismuth salicylate in doses of 10 to 15 gr. or else combine the carbonate of bismuth in 30 to 40 gr. doses, either with salol in 10-gr. doses, sodium sulphocarbonate in 15-gr. doses, or carbolic acid in 2-gr. doses. To these may be added strychnin, ginger or ammonia as before, together with a suitable quantity of some morphin solution if there is much pain. Bismuth salicylate is another valuable remedy. When acidity gains the upper hand, despite the bismuth mixture, sipping a wineglassful of very hot water with 10 or 15 gr. of sodium bicarbonate dissolved may give temporary relief. If farinaceous substances predominate in the diet two or three ounces of malt infusion should be taken with each meal. Whenever there is an excess of HCl in the stomach the diastatic action of the saliva is prematurely arrested, and malt given in this way assists Nature to dispose of the starch. When the urgent symptoms are relieved in atonic dyspepsia, tonics still in combination with antiseptics should be ordered. It is often of advantage after the hyperacidity is overcome to give one or other of the mineral acids combined as for atonic cases, but given before food. In nervous dyspepsia it is desirable to increase the quantity and variety of food as rapidly as possible and get the patient to take as much fat in a digestible form as he can assimilate. The stomach discomfort depends on the nerve exhaustion, and is only a local manifestation of the constitutional state, and the routine methods of acids and alkalies therefore fail. Fermentative processes, however, play a considerable part and antiseptics should be administered. The most reliable drugs are zinc valerianate or arsenic, and he suggests the following formula:

R. Zinc valerianate	3 gr.
Pure carbolic acid.....	2 gr.
Arsenous acid	1/40 gr.
Extract of cannabis indica.....	1/4 gr.

One such capsule to be taken after food three times a day.

Rest from physical work is imperative; change of surroundings, cheerful society, massage and hydrotherapy are advisable.

7. Micro-organisms in Vaginal Secretions.—Bergholm made bacteriologic examination of the vaginal secretion of forty pregnant women at Helsingfors. The reaction was always acid. No micro-organisms pathogenic for animals could be found in any case, no pyogenic staphylococci or streptococci nor colon bacilli.

8. Deportation of Chorionic Villi.—Pöten concludes from study of seven pregnant uteri that the villi may be torn off and swept away to other parts of the body, in the course of a normal pregnancy without pathologic sequelæ.

9. Obstetrics and Gynecology in Sixth Century.—Wegschneider has been preparing a German translation of a work by a Byzantine physician who flourished about 540 A. D. and cites many interesting extracts from the part devoted to obstetrics and gynecology. The original Greek manuscript was not published in book form until 1892.

13. Hydrorrhea Gravidarum.—Fleck describes a case in which the child retained the fetal attitude for months and had not attained the complete use of its limbs when last seen. The knee and elbow were particularly stiff. This condition was

evidently the result of the cramped position in the uterus and may explain certain cases of clubfoot. The symptoms of hydrorrhea usually develop suddenly about the third month, and suggest impending abortion, but the fetus continues its development outside the decidua. The hemorrhages observed from time to time are probably the result of the movements of the fetus eroding the unprotected uterine walls.

14. Extrauterine Pregnancy.—Fernwald reports 17 cases, with 4 deaths. Death occurred the nineteenth day in one case from embolism and one patient was moribund when received. There was pyosalpinx on the other side and fatty degeneration of all the organs in the two other fatal cases.

16. Ureter Fistula or Injury.—Stoeckel reported two years ago 8 cases and now adds 7 more. He finds that the ureter is most liable to be injured during vaginal extirpation of a carcinoma of the cervix. He reviews the etiology, symptoms, diagnosis, prophylaxis and treatment. He implanted the ureter in the bladder in 5 cases, by the intraperitoneal route. The results have been excellent. He describes all his cases in detail.

19. Placenta Previa.—Nearly 200 pages are devoted to this comprehensive study of placenta previa as observed 101 times, or in 3.07 per cent. of 3085 childbirths between 1892 and 1900. Multiparæ were the subjects in 76.15 per cent. and the symptoms were severe in all, while the uniparæ presented only mild cases. Strassmann studies his material from every point of view and draws the conclusion that obstetricians and physicians must strive to prevent placenta previa by ensuring perfect involution of the uterus. Conception should not recur until the uterus announces by the return of menstruation that it has regained full functional capacity. Nursing should be promoted on account of its influence on involution. After weaning the child there should be no conception until menstruation has been re-established. These precautions should be impressed with special urgency on pluriparæ, and particularly after the birth of twins or the occurrence of placenta previa. It may be possible by prophylaxis along these lines to prevent the occurrence of placenta previa in many instances.

24. Cinnamic Acid in Treatment of Tuberculosis.—Krause has been using cinnamic acid according to Landerer's directions during the last two and a half years. He has now a record of 21 cases followed for a sufficient length of time, and the results compel him to commend hetol as a most valuable means for the treatment of tuberculosis of the lungs and larynx. He at first attributed the benefits derived to suggestion as the main factor. But he has found a means of testing the physiologic and anatomic factors at work. This is the study of scraps curetted from a tuberculous lesion in the larynx, as compared with those from patients without cinnamic acid treatment. The tubercles under hetol commenced to grow smaller in the first weeks of treatment, and the leucocytes were found exceptionally numerous at all stages. Young connective tissue soon made its appearance in the tubercle, and in time the whole structure, while retaining its shape, grew smaller and became transformed more or less completely into connective tissue. Notable clinical improvement was soon manifest in every case. In one instance a febrile patient whose temperature had persisted high during several months at a sanatorium found the temperature normal in the first week of hetol treatment and bed rest. Not infrequently all the pathological manifestations vanish except for slight modifications in the breathing sounds. In other cases the portions of lung involved become indurated, and in the severe cases the coarse moist râles vanish and the breathing becomes freer and easier. This method of treatment is peculiarly advantageous for cases too advanced for sanatorium treatment as the disease may be arrested and life prolonged. It must be continued for months or even years in some cases. The number of leucocytes rapidly and progressively increases under the hetol, but not unless injected directly into a vein. He gives the details of his 21 cases. All were improved, 13 nearly and 4 completely cured.

25. Causes of Primary Glaucoma.—Levinsohn ascribes primary glaucoma to a solid enlargement of the ciliary body, especially of its processes. The early clinical symptoms indi-

cate such a lesion, and sections from an eye with subacute glaucoma which he has recently had occasion to study, and others with absolute glaucoma, confirm this assumption.

27. Photography of the Fundus of the Eye.—The photograph is taken by means of a combination of lenses and a flash-light. The results are striking, as shown by photographs of the eyes of a cat.

28. Temporary Partial Amaurosis and Migraine.—Jolly lost an eye from a traumatism in childhood. During his student life he suffered from migraine. In the last few years the remaining eye has exhibited typical attacks of teichopsia, accompanied by migraine. Study of his symptoms has convinced him that this pure unilateral "flimmer" scotoma originates in the optic nerve or the retina of the eye involved.

30. Virchow's Last Illness.—Körte was Virchow's physician. He mentions that when Virchow fell in alighting from a street car one evening last winter (the company claim that he stepped off before the car had quite stopped), the neck of the femur was broken, but this soon healed admirably under appropriate treatment. But the abrupt change in his active life made necessary by the treatment of the fracture rendered him restless and impatient and interfered with sleep, and symptoms of senile degeneration gradually developed. The direct cause of death was a myocarditis, probably atheromatosis of the coronaries, possibly combined with inflammatory processes in the kidneys from a transient cystitis. As long as his mind was clear he confidently expected soon to resume his work. A radiogram of the healed fracture is appended.

32. Clinical Value of Ehrlich's Dimethyl Reaction.—In the tests of this reaction described, it was found that it occurred only in severe forms of disease, but was not specific for any one. It is valuable, as it indicates an aggravation of certain special toxic, or infectious-toxic diseases. It parallels the exacerbation. In Kaziczowsky's experience with enteritis, the test was positive only in cases of tubercular origin.

36. Local Application of Heat.—Gross describes a modification of the thermophore, which Quinke introduced into use in 1896. The present device is a tin tube wound back and forth two or three times and fastened to a sheet of asbestos. The tube is connected with a small closed vessel of water over a lamp, one end entering at the top and the other at the bottom of the boiler. There is thus a continuous circulation of warm water through the coil of tubing. These thermophores may be used to keep bags filled with fine sand at an even temperature, and this combination is proving remarkably beneficial in cases of subacute sciatica, lumbago, old spondylitis and especially of gastric ulcers. To prevent the sand from shifting in the bags they can be basted to divide the bag into four long pockets, but it is more pliable without this. The local sweating is one of the benefits of the measure, as it promotes elimination and absorption of pathologic products. In the treatment of chronic exudates the weight of the sandbag may be a factor in the benefit derived.

38. Prurigo Lymphatica.—Buschke describes in detail three cases observed at Lesser's clinic in which prurigo was evidently connected with an affection of the lymphatic system. The patients were 22 to 58 years old and the localization was more diffuse than in Hebra's prurigo. In all the cases certain lymph glands and the spleen were enlarged, but there was no lymphocytosis. Otherwise the cases suggested pseudoleukemia. There were no indications of tuberculosis. A few similar cases have been reported with and without hypertrophy of the spleen. In one published by Blaschko the prurigo developed after a lymphosarcoma in the shoulder had been noticed, and it retrogressed after the neoplasm had been extirpated. There was recurrence later of the growth in the cicatrix and the prurigo and itching reappeared with it. Examination of 5 patients with classic prurigo and 6 with scrofula failed to disclose anything abnormal in the glands or spleen. Lymphatic prurigo is probably caused by some abnormal cell products. The abnormal chemistry of the cells may be a congenital condition, which would explain its rebellious and recurring character. Further study is needed of the cutaneous sensory neuroses observed

associated with internal affections, such as internal cancer, chronic intoxications, echinococcus and recent malaria, to note whether the dermatosis belongs to the prurigo or the urticaria group. The lymphatic prurigo described above has never been examined postmortem. There is a possibility that it may yet prove to be a tuberculous affection.

39. Inoculation Metastasis of Cancer.—Brieger has seen a case similar to that described by Olshausen in No. 42, and reports recent attempts to inoculate animals with carcinoma. He prepared the animals by injections of human blood as for the biologic blood test, and then transplanted still warm carcinoma tissue into the anterior chamber. Pannus developed after this transplantation in a rabbit that had been injected previously with 60 to 70 c.c. of blood from human placenta. The pannus gradually retrogressed, and the carcinoma tissue was dissolved until after three months there is now merely a slight defect in the cornea with no traces of a pathologic lesion. In other animals prepared in the same way scraps of chancre implanted in the cornea were similarly absorbed without a reaction. Experiments in this line on dogs and monkeys are now in progress.

40. Malignant Lymphoma.—A case of lymphoma malignum associated with tuberculosis is described by Spijarny, confirmed by the autopsy findings. The general appearance and heredity suggested tuberculosis, but no symptoms indicated it until a few months later, when the patient succumbed to miliary tuberculosis. The clinical picture and the microscope confirmed the diagnosis of lymphoma malignum, although the swollen glands became reduced in size under energetic arsenic treatment. Several writers have reported the coincidence of lymphoma malignum and tuberculosis.

41. Hereditary Relations Between Tuberculosis and Cancer.—Aronsohn has been investigating the heredity of his tuberculous patients, and has been much impressed with the fact that in the majority of cases in which no tuberculous hereditary antecedents could be discovered, one of the parents had had a cancerous affection. He describes the particulars of 20 such cases, and adds one in which a carcinoma of the throat occurred in a patient in whose heredity neither tuberculosis nor cancer could be traced, but the patient's two wives had both been tuberculous. He believes that conjugal tuberculosis usually affects the throat. The connection between lupus and carcinoma has been recently emphasized by Ashihara, who collected 126 cases of carcinoma developing on lupus, with 3 personally observed at the Breslau clinic. Lupus, Aronsohn suggests, may be to a certain extent the connecting link between cancer and tuberculosis. A lupous infiltration is one form of tuberculosis, and at the same time it may become transformed into a cancerous growth under certain unknown conditions. In this connection he cites Williams' observation that cancerous tumors disappear in the course of acute phthisis, while, on the other hand, carcinoma may begin as tuberculosis ceases. He found fresh tubercular lesions only once at the autopsies of 136 carcinoma subjects, while in 12 per cent. old tubercular foci were conspicuous. Megay has published a case of acute miliary carcinosis, terminating fatally in ten days, which resembled in many respects acute miliary tuberculosis. A number of cases have been reported in which carcinoma developed on the basis of a tuberculous lesion in the intestine or esophagus. Statistics indicate that there is heredity of cancer in about 10 per cent. of all cases, and Aronsohn observed tuberculous offspring from cancerous parents, in the same proportion. Jacobash noted cancer in the parents in 6 per cent. of 1500 tuberculous patients, and Riffel found 19 such cases in 46 families. The question as to the frequency of cancer in the children of tuberculous parents is still unstudied. Arguments in favor of the inherited character of the tendency to tuberculosis or cancer are the tubercular cerebral lesions found in very young children, also the fungous tubercular processes in children with no process in the lungs, while, on the other hand, persons with pulmonary affections seldom have these or any tuberculous bone or joint lesion. Billroth pointed out that persons with joint and bone affections usually die from exhaustion, and no tuberculous lesions are found in the internal

organs, but merely extensive amyloid degeneration. These autopsy findings are explainable by the assumption of congenital infection and not otherwise. If it should be proved that cancerous parents beget tuberculous children, then there is not only the inheritance of a predisposition to the reception of microbes, but every probability that direct congenital infection has taken place, and that the parasite of one disease, inherited by the child, either creates some special predisposition for the other, or else becomes transformed so as to produce it. If so, then we must assume that the phthisic diathesis may be inherited not only from phthisic, but also from cancerous parents, and that carcinoma, lupus and tuberculosis belong etiologically to the same family.

44. Treatment of Empyema.—Israel makes a vertical branch to the usual transverse incision for evacuating empyema. This enables the empyema to be drained at the lowest point. There is no stagnation, and healing proceeded with remarkable rapidity in the ten cases thus treated. He carries the incision down to the eleventh rib, resecting a portion of the tenth. The annoying tendency to coughing is avoided. Hemorrhage is more readily controlled and the cavity can be irrigated more easily.

48. Communicability of Bovine Tuberculosis to Man.—In this address, which was the feature of the last day of the Tuberculosis Conference, Koch reviews the various cases of supposed transmission to man of bovine tuberculosis, and shows that none of them will bear criticism. He proclaims that no case can be accepted as evidence which has not been examined postmortem, with certainty of tuberculosis of the udders of the cow giving the milk, and with the history of other persons using the same milk, and exclusion of all other sources of infection. On the other hand, no cases can be accepted as contrary evidence without demonstration of udder tuberculosis, sufficiently prolonged observation of the persons and testimony, as to whether the milk was boiled before using. For the present he reiterates that the injurious influence on man of bovine tuberculosis milk and its products is not proven. He affirms that the principal, and possibly even the only, source of infection of man is a person with tuberculosis who, in consequence of the unfavorable environment or his disregard of the simplest rules for the prevention of the infection of others, may thus prove dangerous for those around him. Instead of wasting our efforts in the superfluous task of preventing infection from bovine tuberculosis, attention should be concentrated more than hitherto on the prevention of infection from man to man in the conditions mentioned. Koch referred to Baumgarten's inoculations of a number of cancer subjects with bovine tuberculosis as important evidence in favor of its non-communicability to man. Koch remarked in conclusion that it is more interesting to seek for infection than for cases of resistance to infection, but it is necessary to collect information in regard to cows with tuberculosis of the udders, trace the history of the persons who have used the milk, and follow them and learn whether they became affected with tuberculosis in a year or two, and what form it assumed.

53. Early Diagnosis of Icterus.—Bouma recommends testing the blood, serum and urine for icterus in suspicious cases, even when they do not show the presence of bile to the eye. This can readily be done with a modification of Hammarsten's reaction, which he describes.

57. Indications for Interruption of Pregnancy in Nephritis.—Hofmeier thinks that there should be no question of inducing premature delivery or abortion in acute nephritis, as there is a possibility of a favorable termination, and as the interruption of the pregnancy has no influence in preventing the threatening eclampsia. In the chronic form and in "pregnancy kidney," the pregnancy should be interrupted if, notwithstanding appropriate medication in the former case and dieting in the latter, the condition grows steadily worse.

58. Ibid. in Internal Diseases.—Schauta reviews the entire list of internal affections and proclaims the conclusions for each in turn as derived from his own experience and that of others in respect to the advisability of interrupting the preg-

nancy. In case of pulmonary tuberculosis or mitral stenosis, he would not advocate interfering with the pregnancy except under certain conditions, while certain other affections are an absolute contraindication to it. The latter include the psychoses, pneumonia, pleuritis, pneumothorax, the acute infectious diseases, measles, scarlet fever, variola, erysipelas, diphtheria, dysentery, and the genital tumors, myomata, cysts, carcinoma. In cases of serious polyneuritis, tetany, nephritis and hyperemesis, the chances are that the child is doomed under any circumstances, while the mother may recover if delivered from the stress of pregnancy. In other affections, such as the chorea of pregnancy, etc., the child may be saved by premature delivery, and is in danger without it. In inevitably fatal cases of cerebral tumors or hemorrhage, miliary tuberculosis or pernicious anemia, it may be the only means to deliver the child alive. The child should be delivered in case of nephritis so soon as it is viable, or severe general disturbances are liable to follow. In the interest of the child accouchement forcé gives better results in moribunda than Cesarean section. The amaurosis of pregnancy requires energetic treatment and retinitis, immediate premature delivery.

59. Hysterectomy in Puerperal Infections.—Fehling agrees with the majority that hysterectomy is indicated in puerperal infection only when the latter is restricted exclusively to the uterus. In exceptional cases of puerperal uterine metrophlebitis (pyemia), hysterectomy may prove useful combined with ligation and extirpation of the thrombosed veins in the broad ligaments and of the spermatica or of the latter alone.

60. Ibid.—Leopold's address was reviewed in *THE JOURNAL* of December 6, p. 1491.

61. Tuberculosis of Female Sexual Organs and Peritoneum.—Veit summarizes his address delivered at the recent International Congress of Gynecology in the statements that peritoneal tuberculosis is always secondary, but the genital may be either primary or secondary, or merely a tubercular lesion in the peritoneal investment of the genitalia. Peritonitis with nodules, not referable to an ovarian tumor or carcinoma, is generally tuberculous. Peritoneal tuberculosis may exceptionally retrogress spontaneously, but can always be benefited by a laparotomy. The few cases of failure to cure that have been recorded were generally those with advanced tuberculosis in other organs. Recent cases should, therefore, be operated on without delay as soon as the affection causes trouble, and the intervention should be repeated if necessary. Chronic cases should be kept under supervision, and if there is no tendency to spontaneous retrogression, should be operated on. The intervention should be simply a laparotomy in the linea alba, complete evacuation of fluid and closure of the abdomen. If at the same time a completely isolated genital tuberculous lesion is discovered, the intervention should conclude with the radical operation. Veit is inclined to attribute the favorable result of the intervention to the influence of the serum, normal or with acquired antitoxic power. Three-fourths of all cases on record have been cured locally by the laparotomy, but tuberculous lesions elsewhere are not affected by it.

62. Ibid.—Martin is convinced that genital tuberculosis is much more common among women than is generally accepted. There are no pathognomonic symptoms of it, but inflammatory processes in the genitalia with tubercular lesions elsewhere should arouse suspicion. Chronic inflammatory processes evidently create a predisposition to it, as also dystrophy and hypoplasia. He believes that the infection is generally derived from the intestines, by way of the glands or peritoneum, or possibly through the blood. Several near points are usually affected at the same time, with sound intervals between them. The primary lesion may heal while the secondary infection continues a progressive course.

63. Ibid.—Amann attributes the source of genital tuberculosis in the female to primarily affected bronchial glands as the only origin thus far positively established by anatomic research. The lung or bronchial tubes are almost invariably simultaneously involved. Women are affected with genital tuberculosis in 20 per cent. and men in 3 per cent. of all cases.

Hypoplasia of the genital organs enhances the predisposition to tubercular lesions, also chronic inflammatory processes and the puerperal state. The tube is almost invariably the site of the first lesion. He thinks that primary infection from without of the female genitalia is extremely doubtful. No findings should be considered in the study of the subject except those of autopsies in which careful search has been made for hidden foci. There are many chances for infection by way of the air-passages in living with a tuberculous husband. Some of the most prominent pathologic anatomists affirm that they have never encountered an undoubted case of primary genital tuberculosis in the female adult. A primary tubercular lesion on the external genitalia or vagina has never been observed to date. Tuberculosis of the urinary passages is always descending. The kidney is first affected by way of the blood.

64. **Surgical Treatment of Uterine Carcinoma.**—Wertheim's address was reviewed in *THE JOURNAL* of December 6, p. 1491.

70. **Cryoscopy in Diagnosis of Death from Drowning.**—It is a well-established fact that in drowning the water drawn into the lungs finds its way into the capillaries and thus into the blood, diluting it to a notable extent. Carrara last year called attention to the difference in the concentration of the blood in the left heart, thus diluted in such cases, and in the right heart, which does not have time to feel the effect of this dilution. By determining the freezing point of the contents of the halves of the heart separately, a marked difference between the two halves is evidence that the subject died from drowning, as he has been unable to discover any other pathologic condition in which similar conditions prevail. Carrara's research was mainly on dogs, but Revenstorff has found in his experience at the Harbor Hospital at Hamburg that his conclusions are equally true in regard to human beings. In 5 out of 12 cases of drowning the difference between the freezing point of the blood in the left heart and the right was as .48 to .68; .28 to .55, etc. In the other cadavers the difference was merely .62 to .67; .77 to .81, etc. The negative result of the test, therefore, does not exclude drowning, but the positive result is absolute proof of it, and is a valuable aid in forensic cases, even for newborn infants. In none of his cases in which the test was positive could the slightest dilution be determined in the right heart. The difference between the two hearts ranged from .10 to .27 of a degree. The diagnosis is possible by this means in certain cases from mere inspection of the cadaver, before the autopsy. Advanced putrefaction will detract from its reliability as the freezing point of the blood in the right heart falls more rapidly than that of the left. [The figures refer to the Centigrade thermometer.—Ed.]

78. **The So-Called Hardening of Children.**—Hecker says that the cold bathing and sleeping in cold rooms which are applied so vigorously by many families as a means of hardening their children, have in reality the opposite effect in many cases. Their physicians are like the fishermen in the fairy tale who were terrified at the sight of the genii they had invoked. He has been examining 34 children brought up on these principles and finds that the systematic hardening process very frequently entails an exaggerated tendency to colds, sore throat, and respiratory affections, also to severe anemia and general nervous disturbances, neurasthenia, loss of appetite, restless sleep and irritability, with change of character. It may also induce acute and chronic recurring intestinal affections, and aggravate the course of infectious diseases, especially of whooping cough. He reports a number of cases in detail to sustain these assertions. Infants should always be kept warm at all times, he says, but after a child is a year old the hardening measures may be commenced, though very gently and gradually and strictly individualized. No furs should be worn, and the throat should not be wrapped up. During north-east winds, extreme cold and snowstorms, children should be kept indoors. The windows of rooms where young children sleep should not be kept wide open except in summer, and in a mild climate. If the child shrinks from a cold sponge bath, it should be applied very cautiously, and even pleasure in the bath is not an absolute criterion that it may not have in-

jurious after-effects. Cold sponging is better than cold douches for children, and once a day is enough. Cold water should not be used for children without a preceding medical examination, especially if they are nervous or anemic.

79. **Cinnamic Acid in Tuberculosis.**—Riegner has treated 9 cases of tuberculosis with cinnamic acid according to Landrèr's directions, and has observed 12 others treated by a colleague. The results by the intravenous route were very good and encourage further treatment. Intramuscular injections failed to disclose any beneficial effect. He thinks that suggestion has something to do with the results, but only as a subordinate factor.

80. **Gonorrheal Urethritis in Boys.**—Fischer adds 2 to the 69 cases on record. The course of the infection seems to be more rapidly acute than in adults, and the posterior portion of the urethra is soon involved. Strictures are not infrequent. The infection was extragenital in about two-thirds of the cases. Boys of about 6 were in the majority.

85. **Serum Treatment of Articular Rheumatism at Senator's Clinic.**—Menzer reports treatment of 33 patients with a serum made by inoculating animals with streptococci derived from the tonsils of patients with articular rheumatism. They were usually found unassociated with other bacteria. He is convinced that the bacteria in the nasopharynx may acquire such virulence under certain circumstances that they are able to overcome the resistance of the lymphatic apparatus in the throat, and penetrate into the blood. Here they induce metastatic affections at the points which are anatomically less capable of resistance, as consisting merely of fibrous tissue, with few cells. The joints, serous membranes and endocardium are prominent examples of this poverty in cells, and these are the points most frequently assailed. The reaction of the organism is manifested by local hyperemia, swelling and pain. The infection does not jump from joint to joint, but the reaction occurs wherever the bacteria encounter feebleness and gain a foothold. The new serum is not an antitoxin, but acts by re-enforcing the organism in its struggle against the infection. As the reaction is thus re-enforced the temperature rises and the affected parts become more swollen and painful, but this intensified reaction is brief, and soon conquers the invading streptococci and the patient is cured. It was impossible to immunize animals by means of the serum, as owing to the lack of previous passage of the streptococci through animals they were not virulent enough for this. Menzer proclaims that the results of the serum treatment in 33 cases in which it was applied have been extremely encouraging, and he recommends it for general adoption, although he disclaims the idea that he has found a panacea. In 7 acute cases treated with the serum alone, the joint affection and fever lasted on an average seven and seven and a half days. The patients were allowed to get up the seventeenth day, eight days after all pain and fever had subsided. The heart was clinically normal in all but one case, in which there was a slight systolic murmur. In 4 other acute cases, treated previously with the salicylates without effect, the joint affection and temperature lasted six and six and a half days. The heart was clinically normal when dismissed in 2 cases as also in a fifth case treated at home for eight days with aspirin before serum treatment was instituted. All the above cases convalesced rapidly without relapse. The majority of the joints could be used without pain by the third to fourth day. The fever keeps up longer, and he considers this an advantage over salicylic medication. The latter acts by reducing the reaction on the part of the organism instead of enhancing it like the serum. With salicylic medication the infection is not conquered, and relapses and exacerbations are liable to occur, while under this serum treatment there were no relapses nor exacerbations in any instance after the fever had once declined. Three of the cases were treated at Leyden's clinic.

87. **Levulosuria and Levulosemia.**—Rosin and Laband remark that spontaneous levulosuria may occur with little if any glycosuria, as in a case described. It may also occur in the course of diabetes mellitus, with a considerable amount of

levulose in the circulation, enough to induce rotation to the left. There may also be a large proportion in the urine, but not quite enough to change the rotation. They add that Seliwanoff's reaction is extremely valuable for the study of anomalies in the carbohydrate metabolism. This reaction is the bright red tint that develops when urine is heated with equal parts of fuming hydrochloric acid and a few grains of resorcin. In the case reported it was impossible to influence the levulose in an alimentary way.

94. Congenital Dislocation of Hip.—Heusner remarks that Lorenz, in 450 reductions of congenital luxation of the hip, has a record of 11 fractures of the neck of the femur, 1 of the pubis, 1 of the ilium, 3 transient paralyses of the perineus nerve and 5 of the crural, with 3 permanent paralyses of the sciatic nerve and one case of gangrene of the leg in a girl of 13, probably due to the unduly tight cast. In several cases Narath's hernia was observed and frequently there has been stiffness from imperfect fitting of the parts of the joint. In only two of the latter cases have there been permanent disturbances. Heusner and Hoffa have not been so fortunate in this respect. The acetabulum can not become shaped to hold the head in the few months of treatment. Altering the shape of the acetabulum is, therefore, not the aim to be striven for, but merely the shriveling of the capsule and musculature to induce the most favorable position for retention. It is, therefore, better to renounce the attempt to secure functional weight-bearing in cases which display a tendency to recurrence of the dislocation. The head is liable to be forced out of its cavity, instead of being pushed into it, if the patient be allowed to use the limb. Ducroquet of Paris has secured better results from the Lorenz method than Lorenz himself, Heusner asserts, as he does not allow his patients to be up and about. The chief merit of Lorenz's method is the extreme abduction which counteracts the injurious influence of the shortened adductors, and the head is brought to the front of the pelvis. But his method does not pay sufficient attention to the anteversion position of the neck and the stretching of the shortened abductors. The tendency of the foot to abduction is the result of the insufficient stretching of these abductor muscles, especially of the *gluteus maximus*, by this method. The thigh must be held in inward rotation to the utmost possible extent, in order to stretch these muscles. This requires a cast extending below the knee and even including the foot, in order to use the leg as a rotating lever, but Lorenz disregards this point and ends the cast above the knee in order to allow the child to be up and about. He is skeptical as to the necessity of this inward rotation which Lange, Hoffa, Schede and Heusner himself consider so necessary. The danger of redislocation is that of outward rotation, and Schede has inaugurated the latest phase in the treatment of congenital dislocation of the hip joint, by working against this tendency. He uses an extension apparatus, stretching both the sound and the affected leg, with counter-pressure at the perineum with a padded leather band. The legs are drawn far apart and the head of the femur is gradually pulled down on a level with the acetabulum. It is then slowly rotated inward, with strong pressure from behind against the trochanter with the fist, when the head can be heard grinding into its proper place. The Lorenz method of manipulating the capsule is then followed, on an ordinary table, and his cast applied with an abduction splint and leather pelvis girdle later or in case of bilateral luxation, a leather contrivance like swimming trunks, with a screw to exert pressure against the trochanters. Heusner does not agree with Lorenz that it is better to wait until a child is two years old before attempting intervention. He thinks that early infancy, with its energetic growth, offers the best prospects for regeneration, while delay invites rapid aggravation of the deformity. He illustrates the various devices that have been found most useful by himself and others.

109. Functional Improvement of Defective Hip-Joints.—Lorenz does not refer to any special affection, but to the various pathologic conditions of the joint from different causes in which the function of the joint is seriously compromised with pain when weight is borne on it. He has been strikingly

successful in such cases, he states, by a method of over-correction, securing an ultra-physiologic position of the joint, in cases of irreducible congenital luxations and in luxation fractures of the neck of the femur. The results attained encourage him to extend the scope of the intervention to healed coxitis with imperfect acetabulum formation and adduction contracture, also to arthritis deformans coxae. The aim is to induce a habitual ultra-physiologic over-corrected abduction. This abduction is carried beyond the physiologic limits of the excursion of the joint and is combined with ultra-extension. This combined position has never yet been applied in the treatment of the above categories of defective hip-joints. The upper end of the femur is transposed forward while the limb is placed in ultra-abduction. The maneuvers are accomplished without force. He commences with modeling redressement in order to widen the sphere of abduction. The contraction of the adductors is gradually overcome by blunt, bloodless efforts. Subcutaneous tenotomy is rarely required. By sawing with the ulnar border of the hand it is possible to carry abduction almost to a right angle. Manual rhythmic tractions are the next step. The extension screw is scarcely used at all now. Extension by two assistants, one pulling on a towel wound around the ankle, supplements the pressure of the operator from above on the trochanter, and is usually amply sufficient to mobilize the upper end of the femur vertically and gain 2 or 3 cm. in length. The joint is then over-stretched, aided by elevation of the pelvis, maximal flexion of the other leg and a weight of 20 to 25 kg. If the soft parts will not yield it is necessary to do at once a subcutaneous fasciotomy. The resistance of the subspinal soft parts can seldom be overcome without this. The result gradually attained is that the front surface of the thigh is far behind the frontal plane, and the joint is thus in ultra-physiologic over-extension. When this has been accomplished the head of the femur is mobilized. The neck may be fractured during these maneuvers, but the bone does not separate, and the head can be brought into place just the same. The intervention concludes with the final transposition of the mobilized head forward near the *spina ant. sup.* This is accomplished without further resistance by extreme over-extension combined with a degree of abduction in which the previous shortening becomes over-corrected. This position of the thigh, which is not so extreme as is required for retention of an actual reposition, is maintained by a cast enclosing pelvis and thigh to the knee. The patient is enabled to walk by raising the sole of the sound foot. After three or four months he corrects the abduction nearly to a parallel position of the legs, without ever quite reaching it. The over-extension is rigorously maintained. This new position is immobilized for three or four months. The patient is then able to walk without pain or trouble and with remarkable freedom from disturbances of any kind in comparison to his previous condition. The after-treatment consists in active and passive exercises in over-extension and abduction to maintain the habitual abducted position and prevent the head from resuming its previous backward dislocation. The patient should be able to raise the limb almost to a right angle when lying on his side, and carry it back far behind the frontal plane, to demonstrate the over-extension that is possible with the nearthrosis. The results have been highly satisfactory in all cases. The patients are able to walk without disturbances and limp much less. The limb was lengthened by 1 or 2 cm. One or two years are required to ensure the function of a nearthrosis.

110. Permanent Results of Forcible Reduction of Spondylitic Hump.—Vulpis exhibited two patients in 1898 whom he had straightened by forcible reduction of the hump according to Calot's method. Five years have now elapsed, and he gives photographs of both, which show that the perfect results attained have been permanent. The spine is straight, although possibly a trifle shorter than normal. Joseph has explained how this can occur in such cases by the wedging into each other of the diseased vertebrae. The hump was reduced in horizontal extension, the processes of four vertebrae were resected and a cast applied to the trunk from the back of the head to the knee or thigh. One patient was 5 and the other 8 years

old at the time. In both cases there was a large abscess in the abdomen.

The Public Service.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Nov. 27, 1902:

Assistant Surgeon-General J. H. White, to proceed to Key West, Fla., for special temporary duty.

Surgeon R. D. Murray, granted leave of absence for seven days from December 7.

Surgeon John Godfrey, granted extension of leave of absence for three months from December 13.

Asst.-Surgeon Carl Ramus, granted leave of absence for one month from December 1.

Asst.-Surgeon C. E. D. Lord, granted extension of leave of absence for one month from December 6.

Asst.-Surgeon C. W. Wille, on being relieved from duty at Cape Charles Quarantine, to proceed to Washington, D. C., and report to the director of the Hygienic Laboratory.

Asst.-Surgeon J. S. Boggess, relieved from duty at Reedy Island Quarantine, and directed to proceed to Cape Charles Quarantine and assume command of the service, relieving Asst.-Surgeon C. W. Wille, to proceed to Norfolk, Va., as recorder of board for physical examination of Senior Pharmacists F. L. Brown and F. S. Goodman.

Asst.-Surgeon C. C. Pierce, detailed to represent the service at meeting of the American Public Health Association at New Orleans, December 8-13.

Asst.-Surgeon W. C. Rucker, bureau letter of Nov. 19, 1902, directing him to proceed to Reedy Island Quarantine revoked, and directed to proceed to New York, and report to Surgeon G. W. Stoner, Immigration Depot, for temporary duty.

Asst.-Surgeon A. D. Foster, to proceed to Wilmington, N. C., and assume temporary command of the service during the absence, on leave, of Surgeon John Godfrey.

Asst.-Surgeon H. McG. Robertson, to proceed to Chicago, and report to medical officer in command for duty and assignment to quarters.

A. A. Surgeon B. W. Goldsborough, leave of absence granted for twenty-one days by Department letter of October 4, amended so that it shall be for one day. Granted leave of absence for three weeks from November 20.

A. A. Surgeon E. B. Hallett, granted leave of absence for three days from November 26.

Senior Pharmacist A. M. Roehrig, to report to chairman of board of examiners at Stapleton, N. Y., for physical examination to determine his fitness for promotion to the grade of pharmacist of the first class.

The following senior pharmacists are ordered—as Pharmacist Roehrig above—to report, for physical examination for promotion, to the chairman of the boards of examiners in the respective cities named:

John Achenbach, to report at Port Townsend Quarantine, Wash.
G. H. Brock, to report at Detroit, Mich.
E. S. Maguire, to report at Fort Stanton, N. M.
R. H. Gibson, to report at Gulf Quarantine Station.
T. V. O'Gorman, to report at New Orleans.
F. L. Brown, to proceed to Norfolk, Va., and report.
F. S. Goodman, same as Pharmacist Brown above.
Charles Miller, to proceed to Mobile, Ala., and report.
C. H. Woods, to report at Chicago.
F. R. Hanrath, to report at Cleveland, Ohio.
S. W. Richardson, to report at St. Louis.
J. V. LaGrange, to report at Chelsea, Mass.

BOARDS CONVENED.

Board convened at Washington, D. C., November 24, for the physical examination of Mr. G. M. Kohler and certain officers of the Revenue Cutter Service. Detail for the Board: Assistant Surgeon-General W. J. Pettus, chairman; Asst.-Surgeon J. F. Anderson, recorder.

Boards convened to make physical examinations of senior pharmacists, in accordance with the provisions of Paragraph 62, Regulations, Public Health and Marine-Hospital Service, approved Nov. 21, 1902:

At Chelsea, Mass., November 27, for the physical examination of Senior Pharmacist J. V. LaGrange. Detail for the Board: Surgeon R. M. Woodward, chairman; Asst.-Surgeon W. K. Ward, recorder.

At Stapleton, N. Y., November 26, for the physical examination of Senior Pharmacist A. M. Roehrig. Detail for the Board: Surgeon Preston H. Bailhache, chairman; Asst.-Surgeon A. J. McLaughlin, recorder.

At Gulf Quarantine Station, November 27, for the physical examination of Senior Pharmacist R. H. Gibson. Detail for the Board: P. A. Surgeon S. B. Grubbs, chairman; A. A. Surgeon J. A. Moncure, recorder.

At Norfolk, Va., November 27, for the physical examination of Senior Pharmacists F. L. Brown and F. S. Goodman. Detail for the Board: Surgeon J. B. Stoner, chairman; Asst.-Surgeon J. S. Boggess, recorder.

At Chicago, November 27, for the physical examination of Senior Pharmacist C. H. Woods. Detail for the Board: Surgeon C. E. Banks, chairman; Asst.-Surgeon L. P. H. Bahremburg, recorder.

At St. Louis, November 28, for the physical examination of Senior Pharmacist S. W. Richardson. Detail for the Board: Surgeon J. M. Gassaway, chairman; A. A. Surgeon H. C. Wakefield, recorder.

At New Orleans, November 28, for the physical examination of Senior Pharmacist T. V. O'Gorman. Detail for the Board: P. A. Surgeon C. P. Wertenbaker, chairman; Asst.-Surgeon J. W. Schereschewsky, recorder.

At Cleveland, November 28, for the physical examination of Senior Pharmacist F. R. Hanrath. Detail for the Board: P. A. Surgeon H. W. Wickes, chairman; A. A. Surgeon D. P. Osborne, recorder.

At Detroit, November 28, for the physical examination of Senior

Pharmacist G. H. Brock. Detail for the Board: Surgeon H. W. Austin, chairman; A. A. Surgeon R. Granberry, recorder.
At Fort Stanton, N. M., December 1, for the physical examination of Senior Pharmacist E. S. Maguire. Detail for the Board: Surgeon P. M. Carrington, chairman; Asst.-Surgeon J. W. Trask, recorder.

At Port Townsend Quarantine, Washington, December 1, for the physical examination of Senior Pharmacist John Achenbach. Detail for the Board: Asst.-Surgeon M. H. Foster, chairman; Asst.-Surgeon D. E. Robinson, recorder.

At Mobile, Ala., December 1, for the physical examination of Senior Pharmacist Charles Miller. Detail for the Board: Surgeon W. P. McIntosh, chairman; A. A. Surgeon J. G. Thomas, Jr., recorder.

APPOINTMENTS.

Holcombe McGavock Robertson of Virginia, commissioned (recess) as assistant-surgeon, Nov. 17, 1902.

Albert Douglas Foster of Michigan, commissioned (recess) as assistant-surgeon, Nov. 17, 1902.

Navy Changes.

Changes in the Medical Corps of the Navy, for the week ended Dec. 6, 1902:

Medical Director R. C. Dean, retired, ordered to Washington, D. C., for duty as president of the Naval Examining Board.

Medical Inspector S. H. Dickson, detached from the Marine Barracks, Washington, D. C., and ordered to the *Iowa*, for duty as fleet surgeon, South Atlantic Station.

Medical Inspector M. H. Simons, detached from the *Iowa*, and ordered home and to wait orders.

Surgeon M. H. Crawford, resignation accepted, to take effect Nov. 28, 1902.

P. A. Surgeon M. S. Elliott, detached from the *New York*, and to temporary recruiting duty at Pueblo, Colo., and thence to the *New York*.

P. A. Surgeon J. C. Rosenbleuth, detached from the *Wilmington*, and ordered home.

Asst.-Surgeon H. A. Dunn, detached from Cavite Naval Station and ordered to the *Vicksburg*.

Asst.-Surgeon F. A. Asserson, detached from the *Kentucky* and ordered to the *Wilmington*.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General Public Health and Marine-Hospital Service, during the week ended Dec. 5, 1902:

SMALLPOX—UNITED STATES.

California: Los Angeles, Nov. 8-22, 3 cases.
Colorado: Denver, Nov. 15-22, 10 cases.
Florida: Jacksonville, Nov. 22-29, 1 case.
Georgia: Atlanta, Nov. 19-26, 7 cases.
Illinois: Chicago, Nov. 22-29, 1 case.
Indiana: Indianapolis, Nov. 22-29, 3 cases.
Kentucky: Covington, Nov. 1-29, 64 cases.
Louisiana: New Orleans, Nov. 24-29, 1 case.
Maine: Bangor, Nov. 22-29, 5 cases.
Maryland: Cumberland, Nov. 1-30, 1 case.
Massachusetts: Nov. 22-29, Boston, 11 cases, 9 deaths; Cambridge, 1 case; Chelsea, 1 case; Lawrence, 1 case; Marlboro, 2 cases; Newton, 2 cases; Quincy, 1 case; Taunton, 5 cases.
Michigan: Nov. 22-29, Grand Rapids, 11 cases; Detroit, 57 cases, 1 death.
Missouri: St. Louis, Nov. 23-30, 9 cases.
Nebraska: South Omaha, Nov. 23-30, 3 cases.
New Hampshire: Nashua, Nov. 22-29, 17 cases, 1 death.
New Jersey: Camden, Nov. 22-29, 1 case; Newark, Nov. 22-29, 1 case; Jersey City, Hudson County, Nov. 23-30, 1 case; Bayonne, Hudson County, Nov. 23-30, 1 case.
New York: Nov. 22-29, Binghamton, 2 cases; New York, 5 cases.
Ohio: Cincinnati, Nov. 21-28, 3 cases; Cleveland, Nov. 22-29, 15 cases, 5 deaths; Hamilton, Nov. 22-29, 1 case.
Pennsylvania: Nov. 22-29, Altoona, 1 case; Erie, 9 cases, McKeesport, 1 case; Philadelphia, 5 cases, 1 death; Pittsburgh, 35 cases, 10 deaths; 4 cases imported.
Rhode Island: Providence, Nov. 22-29, 1 death.
South Carolina: Charleston, Nov. 22-29, 2 cases.
South Dakota: Sioux Falls, Nov. 22-29, 2 cases.
Wisconsin: Milwaukee, Nov. 22-29, 9 cases.

SMALLPOX—FOREIGN.

Ecuador: Guayaquil, Nov. 8-15, 1 death.
Canada: Quebec, Nov. 22-29, 1 case.
France: Paris, Nov. 8-15, 1 death.
Great Britain: Nov. 8-15, Dundee, 2 deaths; London, 2 cases; Manchester, 2 cases.
Italy: Naples, Nov. 10-17, 1 case.

YELLOW FEVER.

Colombia: Panama, Nov. 18-24, 4 cases.
Ecuador: Guayaquil, Nov. 8-15, 4 deaths.
Mexico: Tampico, Nov. 15-22, 13 deaths; Vera Cruz, Nov. 15-22, 16 cases, 11 deaths.

CHOLERA—INSULAR.

Philippines: Cebu, Sept. 29-Oct. 14, 5 cases, 2 deaths; Manila, Oct. 12-18, 19 cases, 18 deaths; Provinces, Oct. 12-18, 3,703 cases, 2,563 deaths.

CHOLERA—FOREIGN.

China: Hongkong, Oct. 21-28, 1 case, 1 death.
Egypt: Alexandria, Nov. 1-8, 1 case, 1 death.
Turkey: Gaza, Oct. 25-Nov. 1, 449 cases; Lydda, Oct. 25-Nov. 1, 75 cases; Jaffa, Oct. 25-Nov. 1, 5 cases.

PLAGUE—FOREIGN.

Africa: Cape Colony, Port Elizabeth, Sept. 25, 1 case, 1 death.
China: Hongkong, Oct. 21-28, 1 case, 1 death.
Egypt: Alexandria, Nov. 1-8, 1 death.
Japan: Yokohama, Oct. 19-Nov. 1, 2 cases.

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Original Articles.

OBSTETRICS AND THE GENERAL PRACTITIONER.*

M. HOWARD FUSSELL, M.D.

PHILADELPHIA.

My excuse for reading a paper with this title before the Section on Practice of Medicine is that I desire to bring before you the practice of obstetrics as it appears to the general practitioner, and while I have nothing new to suggest, I wish to impress the absolute necessity and practicability of the observance of rules by the general practitioner which have been formulated by specialists in the practice of obstetrics.

I believe it is too much the habit of men who see much of midwifery in general practice to believe and no practice, if not to say, that the strict rules which are now observed in hospitals the world over, and which are taught by all obstetricians, are at least unnecessary in general practice far away from closely populated centers. If this feeling is current, as I believe it is, it is my desire to so place it before this Section that we may all endeavor to do our best to follow what has now been proven to be absolutely necessary for safe practice. To the general practitioner belongs the arduous labor and the honor of conducting the vast majority of all maternity cases which occur. Lying-in charities and maternity wards of general hospitals care well for many of the poor; a few wealthy individuals have the great privilege of employing men who are especially trained in the work of obstetrics to care for their wives during the entire period of pregnancy, but the vast majority of maternity cases come under the care of the family physician. This is my excuse, as I have before said, for presenting this paper to this Section, for I take it that more general practitioners are connected with this Section than with any other of our Association.

Since Lister formulated the law of asepsis, maternity work in the hospitals has become an entirely different practice from what it was in previous years. Formerly mortality in the maternity wards of hospitals was extremely high; at present, both mother and child are perhaps safer in the wards of hospitals than in any other place. It is very questionable, although difficult to prove, whether there has been a corresponding reduction in the mortality rate in private obstetric practice. As general practitioners, as men to whom the majority of women trust their lives during the lying-in period, as individuals who have charge of the majority of the new-

born, it is our duty and our privilege to emulate hospital practitioners and make private obstetric work without avoidable mortality.

One of the most important duties of the general practitioner is to educate his *clientele* to understand that the physician who is to attend a woman in labor should be made aware of the pregnancy soon after it occurs; that they be made to expect that the doctor will have a constant oversight of the patient from that time until the end of the puerperium.

Too often, indeed usually, among the poorer classes, the doctor is not made aware of the expected labor until immediately before its occurrence, and then only because they feel that an unexpected call may not be responded to.

Among the duties of the physician before labor are the following: 1, Repeated urine examination; 2, regulation of the daily life; 3, attention to the breasts; 4, abdominal examination; 5, measuring of the pelvis in primipara; 6, instructions to the woman as to preparation for the lying-in period.

EXAMINATION OF THE URINE.

This is constantly neglected, much to the detriment of many patients. Its neglect often causes the sacrifice of their lives, and I thoroughly believe that if a pregnant woman of whose condition we have been informed and whose urine we have not examined for albumin, is seized with a puerperal convulsion, that we are certainly morally responsible for that convulsion. Indeed, I believe that failure to periodically examine the urine of every pregnant woman whom we are engaged to attend in labor is a criminal neglect. Every woman who is pregnant should have a monthly examination of her urine for albumin and sugar, and during the last two months an examination should be made every two weeks or every week, preferably the latter.

It seems to me that the general practice is for the physician never to examine the urine unless the woman gives some symptom of renal involvement. Nothing can be further from the standard of good practice. We all know that the vast majority of women who have convulsions in pregnancy have had a previous albuminuria which should have been discovered. We also know that the condition constantly gives no symptom (except the albuminuria) before the convulsion. Personally, I am not guiltless of blunders, but, as Le Conte has remarked,¹ "it is more profitable to profit by some other person's blunder than from one's own"; therefore, this case is quoted:

CASE 1.—About four years ago a lady called to engage me to attend her daughter, pregnant with her first child, who expected to be confined in one month. She stated that the

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee; Drs. Frank A. Jones, George Dock and J. M. Anders.

1. American Jour. of Med. Sc., December, 1901.

reaction she called was so that I would be sure to respond to the call when it came. She reported that her daughter was perfectly well, able to be about, without pain or ache. She was told to send the next day a sample of her daughter's urine. Early the next morning, about twelve hours after the lady was in my office, I received a hurry call to go and see the patient. I found her writhing in a puerperal convulsion. Her life was happily saved, but only at the expense of fearful suffering, both on her own part and on that of her relatives. In all probability these trials could have been averted if she had made her condition known early in pregnancy.

Such cases as the above could be repeated from my experience and, I fear, from the experience of all of you until you would tire of the hearing. Unfortunately the ending of many, many cases is death and not recovery.

It is not my purpose, nor will time permit me, to go into the treatment of puerperal eclampsia; the point which I wish to make—the point on which I most insist—is that the monthly specimen of the urine of every pregnant woman should be examined in a routine manner. It makes no difference whether she has symptoms or whether she has no symptoms. It is true that the vast majority of examinations so made will be negative, and the woman would have gone to a successful labor whether the urine had been examined or not, but one case of albuminuria discovered in time to prevent convulsions and death is certainly a recompense for many hundreds of cases examined where the find is negative.

I have suggested that the urine should be examined during the last two months every week or every two weeks; this is important. I have seen a fatal convulsion occur in the person of a woman whose urine was entirely free from albumin ten days before its occurrence. The first indication in this case was extreme headache, followed in a very short period by a severe convulsion, ending in death. Just ten days before this headache the urine was found to be entirely normal; at the time of the headache it was loaded with albumin.

REGULATION OF THE DAILY LIFE.

Unquestionably the majority of women who suffer seriously from morning sickness, from severe pain in any portion of the body, from annoying symptoms, without being told to do so, ask the physician's advice. But, unless some such symptoms do occur it is pretty certain that the average woman will not appear to the physician until the time of labor occurs. She should be taught that an occasional visit to the physician is necessary, in order to see that her general strength is as it should be; that she is taking the proper sort of diet and the proper amount of exercise. Constantly women who are not forced to do their work allow themselves to become so sedentary in habit and remain so much in doors that they become weak, anemic and entirely unfit for the severe throes of labor. All these details can be attended to properly if the woman is made to understand that she must make regular visits to her physician.

ATTENTION TO THE BREASTS.

I believe that much distress can be avoided if regular attention is given the nipples before the labor begins, so that a retracted nipple may be made prominent and the skin over it in a proper condition to resist the maceration of suckling.

ABDOMINAL EXAMINATION AND MEASURING OF PELVIS IN PRIMIPARA.

I believe that during the seventh or eighth month of pregnancy it is wise, and indeed often imperative, that

an abdominal examination be made in order to know the presentation of the child. At the same time an examination of the pelvis should be made, without unnecessary exposure to the woman. The use of an ordinary Martin's pelvimeter is all that is necessary in order to assure us that our patient is not suffering from some deformity of the pelvis which will prevent the safe delivery of the child. The necessity of this procedure must certainly have presented itself to many of us who have much to do with maternity cases. Some which recently occurred in my own practice will suffice to show its advisability:

CASE 2.—Mrs. M. called on Dr. B. of my ward on the evening of April 1, 1902, to attend her in labor, never having spoken to him of the expected labor. He responded to the call and at once recognized that some serious trouble was at hand, and called me in to help. We discovered that so far as the external appearance of the abdomen was concerned it was a head presentation. Examination, however, at once revealed that it was a face jammed hard down into the pelvis, making it impossible to change it into a vertex. Examination of the pelvis showed the anterior posterior diameter very much reduced. A version was performed, the woman safely delivered, but at the expense of the life of the child. A previous measurement of the pelvis could have shown the deformity and made the physician watchful.

CASE 3.—Another case illustrates the value of a simple abdominal examination before labor begins. One of the members of this society was ill, and I was called to attend one of his patients in labor, who had never consulted him previously. The moment the abdomen was observed it was found that the child was not presenting by either pole, and the transverse diameter of the abdomen was greatly in excess of the normal. The head could be felt up above the rim of the pelvis, to the right. Examination discovered an arm protruding, the membranes of course ruptured; the woman much exhausted; the cord prolapsed; the child dead.

In this last case, unquestionably a previous examination of the abdomen would have shown that we had an abnormal presentation, and this could have been confirmed by a vaginal examination, which would have allowed the physician to have been in attendance in time to either correct the presentation or perform the version early, and probably have saved the child's life.

I am very well aware that both of these procedures are rarely practiced even by men skilled. I am equally sure, however, that if we gave the necessary time (and the time is not long) to make such examination we would be enabled to save life frequently and always save the family much distress.

INSTRUCTIONS TO THE WOMAN AS TO PREPARATION FOR THE LYING-IN PERIOD.

Unless the woman is instructed, she will either have nothing out or ready for her labor, or else is likely to have nothing which in these latter days seem necessities. She should be instructed to have her bed properly prepared, to have an abundance of clean water, clean towels, clean cloths, to have basins and soap. Attention to these slight details will certainly save us, as physicians, much annoyance and will expedite the labor and save us time.

MANAGEMENT DURING LABOR.

Another division of the care of obstetric cases is the management of a case during the labor itself. What I have said about the care of a case before labor begins I believe is correct. I am well aware, however, that the very great care which Nature gives to women allows the neglect of the duties of the physician which I have outlined to be fraught with relatively little harm, but

the neglect of our plain duty in the conducting of every case of labor in itself threatens the life of our patient.

If Godliness is ever second to any attribute, certainly it is second to cleanliness in the management of a labor case. The one thing that we want to remember always is that we must be absolutely clean, surgically clean, and we will have relatively little trouble with what are erroneously called malaria, milk fever and various other names which are only misnomers for sepsis. I have often wondered whether the use of antiseptic solutions is an unmixed good, so frequently have I seen gentlemen simply rinse their hands with soap and water, immerse them in antiseptic solution, and be fully convinced that their hands were aseptic, that I have often wished they knew nothing whatever of bichlorid of mercury and its like.

The man in general practice is constantly called in the middle of a busy day to attend a case of labor; he is hurried; he does not wish to remain if it is necessary; indeed, he can not do so, but he should never allow his hurry and his desire to get through to interfere with the first law of cleanliness.

My idea of the practitioner's duty under such circumstances is this: it is absolutely necessary, both for the safety of the woman and the child, and for the economy of the physician's time, that he should know exactly how far advanced labor is. It is true that by external manipulations one may discover fairly well the presentation of the child, and whether or not labor is in progress, but, to me at least, a vaginal examination is absolutely necessary to discover whether I must stay with my patient or whether I may safely leave her, and for how long.

The first thing that I do before making a vaginal examination is to take off my coat and waistcoat, roll up my sleeves above my elbows, scrub my hands and forearms thoroughly for five or ten minutes with brush, soap and water, clean my finger nails with a knife or nail cleaner, then immerse my hands in a strong bichlorid solution, 1-1000 or 1-500. Having done this I have the woman in a proper position for examination, and will allow nothing whatever to touch my hands; especially they must not be wiped off with a towel, but be taken dripping from the antiseptic solution and the examination immediately made.

Having made this examination I am in position to know the progress that labor has made. If it is safe for me to do so I leave the house, giving instructions what is to be done during my absence. If I must remain I immediately give my instructions. If the bowels have not been moved very recently they are ordered emptied by an enema; the exterior genitals are washed with clean boiled water. A vaginal injection is *not* to be given.

I then prepare myself for the labor by dressing myself in a clean duck coat and trousers. This I consider of a great deal of importance; in the first place it looks neat, in the second place it protects the clothing and allows one to go promptly from a labor case of severity to other cases without any trace of the labor. In the third place, and of the very greatest importance of all, it protects the woman against contamination from dusty, dirty clothing. Any physician who drives about all day is in no sense in a proper state of cleanliness to make it safe for him to bring his clothing in close contact with the woman in labor. It is very little trouble, practically no trouble, to carry in the obstetric bag a clean pair of trousers and a clean coat.

I then have placed on the bed a Kelly pad, which has been cleansed by the nurse in attendance. If we trust

to the persons about the house, and remember, I am speaking now of the ordinary every-day, common labor case to which the majority of us are called, we will be handed an old quilt; an *old* one, a piece of carpet, or anything that is thick, it makes no difference whether it is clean or not. The Kelly pad will last for years, is cleanly and will insure the woman not being poisoned from that source.

If the labor is a simple one, the presentation and position normal, there is very little else to be done except to leave the case to Nature. As few vaginal examinations should be made as is practicable, but previous to every examination, if the hands have been used for touching objects about the room, they should be again scrubbed, again immersed in antiseptic solution before the examination is made, and if this procedure is carefully carried out I really think that it makes little difference how many examinations are made; but, as I say, repeated examinations are useless, and by a possibility may be harmful and therefore should be limited.

I do not propose to at all discuss here when to use forceps. The subject would lead me entirely too far afield, but if forceps are to be used the following procedures are imperative: First, have the forceps carefully boiled in the receptacle on purpose for it, if there is one, if not, place the forceps in some vessel large enough to entirely cover them with water and allow them to boil for 10 or 15 minutes. Place the woman in position, carefully scrub the genitals, reprepare the hands by scrubbing, clean the finger nails, and lastly, but not most important, immerse them in antiseptic solution. Have the forceps brought to the room in the receptacle in which they were boiled. Do not allow them to be touched by any one, do not touch them with anything except a clean hand or a perfectly antiseptic cloth which has been boiled or immersed in solution; do not wipe the forceps off. I have seen a man carefully boil his forceps, just as carefully scrub his hands, take the forceps from the receptacle, deliberately pick a towel up from the floor and wipe off the forceps. Certainly all the precautions of boiling and of scrubbing the hands had been made useless by this act, which was entirely needless, needless even if a clean cloth had been used, but more than needless, harmful, when a soiled towel had been used. Let the forceps be applied and the child carefully delivered. If there is a tear let it be at once sewed with needle and silk or gut, which has been boiled with your forceps.

The pad which is to be applied to the vulva for cleanliness sake must also be absolutely clean. The monthly nurse who is so common in most houses will likely hand to you a bunch of rags which certainly look anything but clean, and which, nine times out of ten, have been lying on the floor in a closet. Of course, these must be discarded, and either a cloth which you know to be clean or one which you have yourself boiled used in its stead.

In a word, every time any object is to be brought in contact with the genitals of a lying-in woman that object, be it hand, forceps, needle or what not, must be as near aseptic as it can possibly be.

MANAGEMENT OF THE PUERPERIUM.

With the birth of the child, the severance of the cord and the application of the binder, it appears to be, in the minds of many practitioners, that their active duty ends. It seems to me that one of the most important points of labor is to see that the lying-in woman is perfectly cleansed after labor; unless there is a trained nurse in attendance this will be imperfectly done if

it is not personally attended to by the physician. One should not allow any false feeling of modesty to prevent him from making, first, an ocular inspection of the parts, to see that there is no tear, and if there is a tear in the perineum it should be immediately repaired, it makes no difference what its size. The parts should be most thoroughly cleansed and a perfectly clean cloth applied to the perineum for the purpose of protection.

I believe that no vaginal douche should be given after an ordinary case of labor. If it seems wise that such a douche should be administered, certainly it should not be entrusted to the hands of any but a skilled nurse. There still remains in the minds of many practitioners, I fear, the remembrance of the former idea that a vaginal douche be given after every labor. If this view is not held by the physicians it is certainly tenaciously fixed in the mind of every ordinary monthly nurse. Unless instructions be given to the contrary a nurse is pretty sure to give what she calls a cleansing wash. She will use without boiling any syringe that chances to be in the house; she will use unboiled water; she never dreams of washing her hands, and much more frequently does harm and threatens the life of her patient with this misnamed cleansing than she does good.

One of the most marked examples of the harm which can come from indiscriminate douching came to my notice during the past winter. I saw, with a fellow practitioner, one of the best examples of puerperal sepsis which has ever come to my notice. A woman was extremely ill with a septic pneumonia. She hovered between life and death for weeks. The labor had been one of the most rapid that could possibly be. The doctor was in attendance but a few minutes when labor was completed. Only one vaginal examination was made. On the third day there was a chill followed by fever, which lasted for weeks, eventuating in pneumonia. On questioning the nurse, she said: "Well, Doctor, the fever could not have come because the patient was not kept clean; I gave her a douche every day, and sometimes twice a day." On questioning it was discovered that neither the nozzle of the syringe, the syringe itself, nor the water had been boiled, and, of course, the nurse's hands had not been properly cleansed. There is not a particle of doubt in my mind that this woman's severe illness occurred because of the over-zealousness of her nurse. Now if such women are not given absolute instructions to keep their hands off the patient such procedures will constantly occur.

If a catheterization is necessary after labor it, of course, should be done either by a trained nurse or by the physician himself. This act, which is perfectly free from danger and easily done, may be fraught with fearful consequences if all the parts, the hands of the person catheterizing and the catheter itself are not cleansed. Only last week I was seeing, in consultation, a lady and advised that she be catheterized in order to obtain a specimen of urine. The physician removed from his pocket a silver catheter, black with age, and before I could interfere or know what he was going to do, he inserted this vilely dirty instrument into the bladder. It so happened that this case was in extremis, but it would have made no difference certainly to this physician whether a long life was expected or not, the same dirty catheter would have been used. This instance shows that the truth of these remarks are certainly yet to be received by certain practitioners. Every physician has now the opportunity of observing in hospital operating rooms what surgical cleanliness means. Let him avail himself of the opportunity.

I have tried to detail what can be briefly summed up as follows: Attention to the woman very early in pregnancy until the puerperal period is ended, before labor examination of her urine, regulation of her habits, knowledge of the size of the pelvis, knowledge of the presentation of the child, during and after labor surgical cleanliness, such cleanliness as can only be thoroughly learned by observation in the operating room of a hospital.

THREE CASES OF INVOLUNTARY MOVEMENTS IN LOCOMOTOR ATAXIA.*

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The following cases illustrate three different forms of involuntary movements in locomotor ataxia, namely, choreiform movements; irregular, slow contractions of groups of muscles, and a fine rhythmical tremor. I have in a previous paper¹ classified the involuntary movements in tabes as follows: 1, Associated movements which may exist also in other forms of organic diseases of the nervous system; 2, sudden twitching of the trunk or extremities, occurring with or without pain and more frequently at night; 3, twitchings in isolated muscles or parts of muscles; 4, fibrillary twitchings; 5, rhythmical tremor resembling paralysis agitans; 6, passive movements, such as those which occur when a patient attempts to sit up in bed without the assistance of the hands or when he coughs; and finally, 7, involuntary movements previously described as athetoid movements. To this classification, I think, may be added choreiform movements. These, however, I believe to be rare. The case reported in this paper is the only one I have ever seen in my experience, which covers a great many cases of this disease.

CASE 1.—The patient was a widow, 66 years of age, who had always enjoyed good health. The family history was practically negative. Her father was killed; her mother died of apoplexy at 61 years of age, an only sister at 42 succumbed to Bright's disease. She had one child who died of "congestion of the liver" at ten years of age. Though she had always done her own housework, her life had not been especially hard save for one serious exception. Her husband died of insanity after three years' illness which was known only to the patient. There was no specific history, and the patient was always temperate in the use of alcohol.

Her present disease began in 1883, the first symptom being sharp, shooting pains in both legs and thighs. After a year her knees "gave way" and her gait grew more and more uncertain and unsteady until finally in 1893 she lost the power of walking entirely. Early in the disease, about a year after the pains first began, choreiform movements made their appearance in the arms, legs and body. These varied in severity from time to time and have persisted to the present. For five years she had noticed a failure in her sight, occasionally diplopia and a persistent ptosis of the right eyelid. Since 1893 there had been retention of urine and from time to time involuntary discharge if catheterization was neglected. The rectal sphincter had not suffered.

EXAMINATION.

On examining her April 28, 1902, for the first time, I found her greatly emaciated generally. There was also, however, evidence of atrophy affecting certain groups of muscles. Both

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1. Read before the Philadelphia Neurological Society in April, 1902.

anterior and posterior calf muscles on both sides were markedly wasted, while the anterior thigh muscles have practically disappeared. The posterior muscles were in a fair state of preservation. In the arms the biceps and deltoids were wasted to a degree, and the trunk muscles were profoundly involved. There was no hemiatrophy of the tongue. The knee-jerk, plantar reflex, Babinski reflex, bicep-jerk, chin-jerk and abdominal reflex were all absent and could not be developed by reinforcement. There was distinct and characteristic change in sensation. Pain sense was lost below the knee on both sides. Heat sense was impaired irregularly all over the body especially below the knees, left side of trunk and arms, while in the face and hands it was preserved perfectly. Deep pressure was felt poorly in the legs and she localized very poorly. On the plantar surface sensation was delayed three seconds. The results of the eye examination were as follows: Typical reflex iridoplegia was present. There was partial ptosis of the right eyelid, and the movements of the eyeballs were restricted in certain directions. The disc was pale grey and atrophic.

The feet were held in the position of talipes-equinovarus due to contraction of the posterior tibial group of muscles. There were no atrophic bone changes except in the index, middle and ring fingers of the right hand, where at the metacarpophalangeal articulations there were crepitus and some slight deformity. This followed an acute cellulitis, the result of some insignificant injury.

The symptom which makes this case unusual and worthy of being reported was the choreiform movements which the patient presented. The head, arms and body were in an almost constant state of movements resembling very closely those observed in Sydenham's type of chorea. They were greatly increased by emotional disturbances or voluntary muscular effort and during conversation. They ceased during repose to a great extent and entirely during sleep. There was observed in addition to this a slow involuntary clonic spasm of the fingers of both hands when the eyes were closed. Usually two or three fingers were moved, but one or all sometimes were involved.

CASE 2.—The second case presents a different but equally interesting form of involuntary movements. The patient, 55 years of age, a widow, gave the following history: Her father died of an unknown cause, probably not from a nervous disease; her mother of heart disease at 70; a brother of the same disease at 51; another brother of pneumonia; a sister in child-birth, and three other sisters of causes which were unknown. Two of her children died of cholera infantum and typhoid fever respectively. She never had a miscarriage. As a child, she suffered from scarlet fever and measles without sequelæ. She had always worked hard all her life at housework. In 1886 she suffered from an eruption which she described as being first like a flea bite, spreading to the size of a dime and extending all over the body. It lasted three or four weeks, and was not associated with sore throat or alopecia. But since then she has complained of pain in her legs from the knees down, of a shooting character. It was not until 1894 that the legs became unsteady, and thereafter the incoördination was progressive. A year later, upon turning away from her bed the tibia snapped three inches above the ankle-joint. Since then she has never walked, though the fracture healed promptly. In 1894 the left knee-joint began to swell and at the time of the fracture of the tibia was considerably swollen. It was only slightly painful then, and at no time since has she suffered except from the deformity. There has been a gradual change in the joint ever since, until at present there is an outward dislocation of the patella, an enlargement of the articulating surfaces of the bone and a marked disorganization of the joint. The bladder sphincter became incontinent about four years ago, and in the last two years there have been rare involuntary fecal discharges. She has had some transient diplopia in the last two years.

Examination.—Her condition upon examination in April, 1902, was as follows: There was great wasting of the thighs and legs, especially in the anterior tibial group. The arms and body were in a fair state of preservation. The left foot was

held in the position of equino-varus. Common sensation was present but delayed. Pain sense was retained. There was here and there some alteration of the heat sense, i. e., to cold there was a hyperesthesia everywhere, while hot objects were not felt at all on the legs. Heat sense in the hands was normal and sensation otherwise was unaffected in the arms and hands. She localized perfectly everywhere. The left leg was weak. In the right leg muscular power was fairly well retained. The grasp was good on both sides. The knee-jerks were absent and not reinforceable. The plantar reflexes were exaggerated and the Babinski reflex was present. Incoördination in the arms and legs was present, slight in the former, marked in the latter. The heart and lungs were practically normal. Argyll-Robertson pupil was present, the pupils were irregular in size, the left a trifle the larger. There was no change in the discs.

Thus far the symptoms I have related do not deviate from the usual picture of tabes. Let me now draw your attention to the special feature of the case. In the left leg a clonic contraction of the toes was observed which was almost constant. Sometimes the movements were slow, sometimes rapid, but always rhythmical. During sleep they ceased entirely. The patient was only conscious of the condition when her attention was called to it. All the toes were involved, but especially the first three.

CASE 3.—The third case was a man 57 years old, single, presenting the following history: All his family were long lived and were free from any pulmonary, malignant or nervous diseases. The patient stated that he had been always healthy, had never suffered from any serious illness, had been always temperate in the use of alcohol and had smoked excessively. He was infected in 1883 by syphilis, had a single lesion without secondary manifestations. About 1893 he began having the characteristic pains from which he suffered five years, when numbness of the hands, unsteadiness in walking and a fine tremor in both hands gradually developed. By degrees the ataxia increased until in February, 1898, he was unable to walk and has remained bed and chair fast ever since.

Examination.—I examined him for the first time in May, 1898, when I was struck at once by the curious tremor which he presented. The hands were the seat of a fine rhythmical tremor resembling in a striking manner that seen in Parkinson's disease. The pill rolling position of the fingers were typically illustrated. The tremor was still further like the latter disease in the manner to which it responded to voluntary effort. When the patient took a cup in his hand, the tremor was quieted for a few seconds only, after the expiration of this time to be increased. Rest quieted the tremor and muscular effort in one hand first quieted then increased the movements in the other. It was absent during sleep. There was no rigidity of the muscles nor any other signs of paralysis agitans. I therefore concluded that I was not confronted with a case of tabes complicated by paralysis agitans, but that the tremor was a symptom of the former disease. Besides this symptom there was present the usual picture of this disease, namely, characteristic sensory changes; incontinent urination, incoördination in the arms and legs, absence of sexual desire and lost knee-jerk.

The examination of the eye disclosed the presence of Argyll-Robertson pupil, grey discs and some refractive error. There was general emaciation but no localized atrophy. The heart and lungs were not conspicuously diseased, and the urine showed no abnormality.

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DISCUSSION.

DR. H. N. MOYER, Chicago.—This symptom complex is exceptional. I do not recall a single case of tabes which resembled paralysis agitans, though occasional rhythmical tremors of single groups of muscles have been noted. I am not familiar with the type of cases which the Doctor has described. It is a matter of classification, and I am not sure that these cases ought to be included in tabes, not with my understanding of tabes. The first case described presented the ordinary symptoms of tabes, but there were other symptoms. I recall

a number of cases with mixed symptoms in which the diagnosis was kept in abeyance, in some of them for years, and which were ultimately labeled disseminated sclerosis. There is a mixed degeneration in these cases, and I am quite sure that there is a difference between these cases of disseminated sclerosis or mixed degeneration of the nervous system, and what I term cases of tabes. Of course, if we have a disseminated sclerosis in which the posterior columns are involved we get the ordinary symptoms of tabes, depending on its location, but it seems to me that these cases should not be labeled tabes. It is of little moment what term is used to designate them, the interesting thing is the association of the symptoms. I recall the case of a physician who was ataxic; but few who saw him could agree on the diagnosis. Tabes was suggested only to be rejected. It was several years after the first development of the condition before it finally impaired his usefulness and he became practically confined to the house. If you saw him now, you would quickly diagnose the disease as disseminated sclerosis, but in its early stages there were no distinguishing marks of the disease.

DR. D. R. BROWER, Chicago—I wonder whether Dr. Rhein had not in at least one of these cases a combination of degenerative diseases. There are some things in it that suggested Huntington's chorea. I do not see why tabes and Huntington's chorea could not be present in the same subject, as I don't think tabes gives exemption from anything. What brought that to my mind was that I have just gotten through with the treatment of a case of foot-drop and paralysis of the lower extremities. After some little study and examination the diagnosis was made of alcoholic neuritis, and after inquiring into the patient's case we found that he was an old tabetic; that he had had tabes for a number of years. At first glance the case was a typical one. This was an instance of tabes and alcoholic neuritis associated in the same person. He has now recovered from his alcoholic neuritis, but the original tabes remains about the same.

DR. J. D. MCCARTHY, Philadelphia—Any one who studies the pathology of tabes knows that there is a large percentage of tabetic cases in which the disease starts as tabes in the posterior routes and affects the posterior columns, in which later it is associated with a diffused sclerosis affecting the lateral columns. The reflexes, and especially the present Babinski reflex, point to involvement of the motor tracts. Disseminated sclerosis may begin in some cases in the posterior column and in those cases it will have ataxia as a symptom. Dr. Burr and myself reported two or three years ago to the American Neurological Association such a case. I think that case had been diagnosed by a very prominent neurologist as a case of locomotor ataxia, and the patient had never suffered from lancinating pain which occurs in tabes; the ataxia was such as you get from attacks of disseminated sclerosis in the posterior column. Another neurologist suggested sclerosis of the syphilitic type, but the true condition was entirely unsuspected at that time. The autopsy showed a typical case of multiple sclerosis. I think these cases are very numerous and that some of these cases of disseminated sclerosis beginning in the posterior column present nearly the same clinical picture as is presented in tabes. The case of Dr. Rhein's was evidently a case of probably the dorsal-cervical type of tabes in which the Babinski reflex was present and indicated involvement of the lateral columns. Too much stress is laid in diagnosis on these so-called cardinal symptoms. But the most of the cases of multiple sclerosis that we get in this country, and I have examined several cases microscopically in the course of the last three or four years, do not present all, and some of them none, of the so-called cardinal symptoms of multiple sclerosis. In Dr. Rhein's cases, I would like to know the condition of the tonus of the muscles; Von Bechterew decided a condition of hemic hypertonia, due to an irritative cerebral lesion, resulting in irregular movements.

DR. F. SAVARY PEARCE, Philadelphia—The choreiform movements which have been described as being present in these cases of Dr. Rhein's have appealed to me as probably being cerebral in origin whatever the pathologic condition in the cord may be, i. e., functional or organic disease. And it seems to me that

we are right in assuming that the choreiform movements are cerebral in origin since chorea is due to cerebral imitation, whether the disease be sclerotic or nutritional in character as regards the spinal cord.

DR. C. H. HUGHES, Cleveland—When Dr. Brower referred to the mental condition of these patients, the thought occurred to me in regard to this condition which is so common among the insane, and I thought the Doctor was going to touch on that. I think the effort to systematize sclerotic involvement of particular systems of the cerebrospinal axis is probably at fault in regard to these cases. Now it is not necessary for us to assume that when we once discover the route of a sclerosis that it is going to be a typical systematic involvement of the posterior columns alone. I have seen a great variety of cases, of course, in 40 years of observation, 30 years of which have been devoted exclusively to neurologic practice, and I have seen a number of cases, and made some mistakes. The symptom grouping to my mind establishes a primary condition of posterior sclerosis, and while I believe sclerosis is the primary involvement, I would not be disposed to restrict it to the posterior column. I think the sclerosis will extend into the anterolateral columns as well. I think when sclerosis is once established we may expect to find it in other regions as well as in the posterior column. The other signs are frequent pains, the Argyll-Robertson pupil, the cineture feeling and all the typical tabes dorsalis. But sometimes when we observe our cases over a series of years we find symptoms of cerebral sclerosis develop likewise. I have seen these cases last fourteen or fifteen years and then the sclerosis had become generally diffused throughout the near axis. I remember one case of a particular individual in my locality, where the trouble began with posterior sclerosis and where the individual had no tremor, which, of course, does not usually occur in posterior spinal sclerosis, yet he ultimately developed all the symptoms of disseminated sclerosis including intention tremor, and finally became mentally involved, but only during the last part of illness. He was a man of marked organic stamina, a farmer, who had contracted the condition by riding at night-time from the city, fourteen miles distant, to his farm, in order to avoid the heat of the day during the summer. And so the more I see of sclerosis the less inclined I am to restrict sclerosis appearing first as tabes dorsalis, to the posterior spinal columns and the posterior root zones of the cord; it may become disseminated.

DR. J. H. W. RHEIN, Philadelphia—My object in reading the histories of these cases was not so much to describe a new symptom or group of symptoms in locomotor ataxia, but to call attention to the fact that the present-day text-books neglect to describe these symptoms to the extent which they deserve. If I have given the impression that these are cases of disseminated sclerosis, then the fault is not with the cases, but in the manner of describing them, because if we will concentrate our minds on all the symptoms presented and the history of their development, we will recognize that they are not cases of disseminated sclerosis, but locomotor ataxia. The gradual progressive incoordination, characteristic pains, bone changes and ocular symptoms preclude any doubt in the diagnosis. In their present condition we might describe the patient as being in the paralytic stage of locomotor ataxia. They have not the mental changes, the characteristic tremor and the nystagmus of disseminated sclerosis. The fact must be noted that in one case the lateral columns appear involved, as indicated by the presence of the Babinski reflex. In the last stages of locomotor ataxia we not infrequently find postmortem that the disease has involved the lateral tracts.

Incompatibility of Protargol and Cocain Hydrochlorate.
—Von Astruc and Cambe are quoted (from the *Bulletin des Sciences Pharm.*) in a number of pharmaceutical journals as pointing out that the precipitate formed in the preparation of solutions of protargol and cocain hydrochlorate may be avoided by using a 1.5 per cent. solution of boric acid, as a solvent, instead of water. The precipitation is due to the slightly alkaline reaction of the protargol, which is counteracted by the use of boric acid.

SANITARY MEASURES FOR THE PREVENTION OF TUBERCULOSIS IN NEW YORK CITY AND THEIR RESULTS.*

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There is no problem which confronts the sanitary authorities of the large municipalities at the present time exceeding in its importance and magnitude that presented by the tuberculous diseases, nor is there any other sanitary proposal which offers promise of such large returns in a diminishing morbidity and mortality rate as one which provides successful measures for the prevention of tuberculosis.

The problem is not a new one. The tuberculous diseases are not more prevalent than formerly; on the contrary, there has been a steady and very material decline in the death rate caused by them; but only in recent years have the sanitary authorities and the medical profession begun to partially realize the great possibilities in the restriction of this disease. A comprehension of the full meaning of the discovery of Koch on the prevention of tuberculosis has very slowly found its way into the minds of the medical profession, and even now, after twenty years, a large proportion of the profession have failed to grasp its vast significance. Statistics showing the great prevalence of this disease have been quoted so frequently as to have almost lost their meaning, and the people, the sanitary authorities and even the medical profession, have become indifferent to the vast expenditure in suffering and death unnecessarily paid to this evil. Only limited and ineffectual efforts are being made in its suppression. We still view with comparative indifference the ravages of a disease which causes from one-fourth to one-third of the suffering and death at the best period of life, and this, too, when the evidence at command should be, it seems to me, conclusive to every reasonable mind, that it can be mostly prevented at a comparatively small cost in sacrifice, labor and money. I make this statement with a full realization of its meaning, and after a familiarity with the sanitary problems involved, gained by an active participation in their study in a great city for a period of more than fifteen years.

A description of the methods now employed by the Department of Health of New York City for the prevention of pulmonary tuberculosis may properly be prefaced by a brief account of the inception and development of this work. In 1888 the sanitary importance of the tuberculous diseases was urged on the Board of Health of New York City by the writer, and in 1889, in response to a resolution of the board, a communication was made to the department by the writer and the associated consulting pathologists of the department, setting forth the essential facts regarding the nature of the disease, the usual methods of its transmission and the precautions necessary to prevent its spread, and recommending the adoption of certain measures looking to its sanitary supervision.

This communication, which presented the facts in quite the same light as they are now regarded, was printed and widely distributed. Small circulars of in-

formation were also freely distributed in the tenement-house districts, and the public press was utilized for the education of the public as to the communicable nature of tuberculosis. No further action, however, was then taken, as it appeared evident to the board after investigation that the time was not yet ripe for more active measures.

In 1893 the subject was again brought to the attention of the board of health by the writer, and the direct though limited control of pulmonary tuberculosis by the department of health was again urged. The recommendations then made, after careful consideration, were adopted and were put into force under resolutions of the board of health. These resolutions *required* all public institutions in the city to promptly report to the department all cases of pulmonary tuberculosis coming under observation, and *requested* all physicians to report the cases occurring in private practice. They provided for the bacteriologic examination, without charge, of sputum from cases occurring in private practice; for the visitation and instruction of cases not under the care of private physicians, and residing in tenement houses, boarding houses or hotels; for the inspection and disinfection, or, if necessary, the renovation of premises when vacated by consumptives, either by death or removal, and for the disinfection by the department of infected bedding, clothing, etc.

In other words, these measures included partly compulsory and partly voluntary notification and registration, visitation and instruction of the sick, the inspection, disinfection and renovation of premises, and the free bacteriologic examination of sputum from suspected cases. In the establishment of municipal bacteriologic laboratories and in the devising of methods for municipal diagnostic work in bacteriology, as well as in the adoption of these measures for the supervision of tuberculosis, New York City led the way and set an example which has been widely followed throughout the world.

In January, 1897, on the writer's recommendation, the board decided that the time had arrived when the measures carried on under the resolutions passed in 1893, as described above (which had met with but little opposition and had proved increasingly efficient), should be given increased legal force by the adoption of an amendment to the sanitary code of the department relating to the control of this disease. Accordingly, a section was added to the sanitary code declaring pulmonary tuberculosis to be "an infectious and communicable disease—dangerous to the public health," and requiring physicians and others to report to the department all cases coming under their observation.

In this section of the code a broad distinction was intentionally made between tuberculosis—a communicable disease—and those diseases, such as smallpox, scarlet fever, etc., which are properly classed as contagious.

I have always felt that much harm has been done by calling tuberculosis a contagious disease; it produces confusion in the minds of both the laity and the medical profession, because the conception of a contagious disease is always related to such diseases as scarlet fever, smallpox, etc., in which very limited contact or even simple proximity may result in their transmission. Every intelligent person knows that tuberculosis is different in nature from these diseases, and I believe that this distinction should be made and kept clear and definite. Tuberculosis is communicable, but not contagious in the sense that this term is generally employed, both by the medical profession and the laity.

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. Arthur R. Reynolds, George Cook and Heman Spalding.

The ordinance adopted in New York City in 1897 reads as follows:

Resolved, That pulmonary tuberculosis is hereby declared to be an infectious and communicable disease, dangerous to the public health. It shall be the duty of every physician in this city to report to the Sanitary Bureau in writing the name, age, sex, occupation, and address of every person having such disease who has been attended by or who has come under the observation of such physician for the first time, within one week of such time. It shall also be the duty of the commissioners or managers, or the principal, superintendent, or physician of each and every public or private institution or dispensary in this city to report to the Sanitary Bureau in writing, or to cause such report to be made by some proper and competent person, the name, age, sex, occupation, and last address of every person afflicted with this disease, who is in their care or who has come under their observation, within one week of such time. It shall be the duty of every person sick with this disease, and of every person in attendance on anyone sick with this disease, and of the authorities of public and private institutions or dispensaries to observe and enforce all the sanitary rules and regulations of the board of health for preventing the spread of pulmonary tuberculosis.

I may say that when this ordinance was adopted every important medical society in New York City protested against the action of the department of health, but these protests showed by their wording and the remarks accompanying them that the protestants did not understand the scope of the action of the department of health, and that they had arisen in protest against an imaginary evil. They protested against tuberculosis being called a contagious disease, but the department of health never called tuberculosis a contagious disease, and expressly stated that it was communicable and infectious, but not contagious. A determined but unsuccessful effort was then made by the New York County Medical Society to obtain legislation which would deprive the department of health of the power to deal with tuberculosis. During the last two years, however, there have been few protests against the action or attitude of the department; there has been acquiescence, and apparently approval, and it is certainly true that the action of the department has been followed by greatly increased interest and knowledge regarding the disease, and by the institution of active measures in the state and in the city looking toward its care and its prevention.

It is true that the department of health has not endeavored to enforce strictly the regulations. It was not the intention to do so when they were enacted. It has not prosecuted physicians who have failed to report cases; the board is well aware of the fact that large numbers of cases are not reported; but still a constant advance is being made. The attention of physicians who report deaths due to tuberculosis in cases which have not been previously notified is called by special letter to the provision of the sanitary code requiring the reporting of such cases, and they are asked for an explanation for the failure to report the case. A second letter has been rarely required. The superintendents of public institutions are constantly reminded of their obligations in this matter, and usually twice a year a census is made of all the cases in all the public institutions in the city.

During 1894, the year in which registration was begun, 4,263 cases were reported; three years later, in 1897, 9,572 cases were reported, and in 1901, 17,588 cases (including 4,191 duplicates) were reported to the department. During the whole period since the beginning of 1894, nearly 90,000 cases have been reported.

The records of living cases and of deaths are preserved in two card indices—one, a name index, arranged alphabetically, and the other a street index, arranged by streets and by the house number in each street. Dead

cases are entered on blue cards and living cases on pink cards. In addition to the name and address there are entered on the cards the age, sex and occupation of the individual; in living cases also the institution from which reported and the date of report, and in dead cases the date of death. The registry finally is made more complete by platting all cases on a series of maps, which cover the whole of Manhattan Island. There are one hundred and ten of these maps bound in atlas form. They were made under the direction of the department, and each one, three by two feet in size, is drawn to a scale of one hundred feet to an inch. This scale is large enough to show every house lot in the city by an area in which can be platted forty cases of tuberculosis. The maps are so arranged that they represent the sanitary districts of the United States census of 1890. These districts are supposed to contain a more or less homogeneous population. The entry of cases is made by conventional signs, which indicate the month and year of report, and whether the case is living or dead. On these maps each case reported is indicated by a dot. These show that on a single street block as many as 102 cases have been reported within a period of $4\frac{3}{4}$ years, and as many as 24 cases in a single house. For example, on the block on Cherry Street, between Pearl and Roosevelt, 102 cases came to the notice of the department from April, 1894, when this work was begun, to Jan. 1, 1899. The population of this block in January, 1900, as enumerated by the sanitary police of the department of health, was 1,165. On another block bounded by Cherry, Market, Catherine and Monroe Streets, there were 241 cases of tuberculosis, with a population of 3,688. In a third one, which includes particularly the Chinese quarter, bounded by Chatham, Mott, Bayard Street and the Bowery, there were 206 cases, with a population of 2,102. These districts represent perhaps the worst conditions existing in the city, but the number of cases in many others nearly approximates the number found in these. And throughout the tenement-house districts everywhere large numbers of cases have been reported. I presume we must add to these numbers at least one-half as many more to cover the unreported cases, for I do not believe more than two-thirds of the cases in Manhattan and the Bronx were reported when these maps were made.

With a problem of such magnitude as is here presented, how are the authorities to obtain information in regard to the cases without compulsory notification and without knowledge; how can they hope to deal with any measure of success with the existing conditions? I have never heard those who object to registration suggest any practical alternative, and I believe there is none to be found. It may be said that such conditions as have been described do not exist in this country outside of New York City. Perhaps this is in a measure true; but no one can foresee what will be found in any city until the cases are registered, and I have no doubt that conditions approximating those present in New York City would be found in every large city.

Aside from the greater readiness to report cases, an evidence of increasing confidence on the part of the profession in the attitude of the department of health with regard to the control of this disease, is afforded by the increase in the number of specimens of sputum sent for examination; each specimen which contains tubercle bacilli, representing as it does the report of a case. These specimens have increased in number from 511 in 1894 to 6,744 in 1901, and in the present year, judg-

ing from the first five months, they will probably number more than 7,500.

With certain exceptions, such as patients under the care of private physicians, all reported cases, living or dead, are assigned to the medical inspectors of tuberculosis for the district from which the cases are reported. The inspector visits the address given, and, if the patient is living, leaves a circular of information and gives verbal instruction to the friends about the danger of infection and the care of the sputum. If the address is that of a dead patient, or if the patient, though living, has moved, the inspector examines the premises and makes such recommendations as seem to him necessary to render the habitation free from danger of infection. These recommendations, made out on a prescribed form, usually advise the following routine treatment of apartments: Kalsomined or whitewashed walls or ceilings are washed with a solution of washing soda (one-half pound to three gallons of hot water), and then kalsomined or whitewashed again; paper walls or ceilings are similarly washed and repapered; the woodwork is scrubbed with the soda solution and repainted. The inspector's recommendations are forwarded to the board, and on them as a basis a ten-day order is issued on the landlord requiring him to carry out the specified renovation. The execution of the order is then (as with all others of the board) placed under the supervision of the sanitary police. The premises are reinspected, and if, at the expiration of ten days, the owner has not complied with the order, it is referred to the attorney of the board for enforcement. This procedure was determined on because of the difficulty of disinfection of apartments in which cases of tuberculosis have been, and the greater efficiency attained by the system of renovation. The method is easy of enforcement, as is shown by the fact that compliance with the order has not been refused in a single case. The chief point of interest in this plan is that renovation rather than disinfection is called for. Disinfection involves the use of materials and methods which are not universally familiar. The method of renovation required is understood by all, and is more efficient than any method of disinfection which could be employed; and, finally, disinfection often leaves the apartment in an undesirable condition, while renovation is, of course, always appreciated by the tenant. It is in line with this policy that soda solutions are advised for use instead of sublimate solutions. Soda is an efficient cleansing agent, is familiarly known, is usually in the house, and is comparatively inexpensive; and, finally, will be used, and used in sufficient quantity, while more expensive and unfamiliar disinfectants would not be employed.

Not only the apartments, but the household goods should, of course, be freed from infection, and the attempt has been made to have goods, such as infected bedding, carpets, etc., disinfected at the city disinfecting station. This, however, has been only partially successful, for often a considerable interval has elapsed between the death of the patient and the visit of the inspector, and the goods have often been washed, destroyed or sent away to be cleaned. Still, when feasible, goods are removed by the department and properly disinfected.

At the same time that the other measures were introduced, arrangements were made for the collection and examination of sputa for the diagnosis of suspected cases of tuberculosis. This measure was designed to give greater accuracy to the work of the health department in dealing with many cases, and to enlist the cooperation of physicians by affording them such assist-

ance in the diagnosis of cases as otherwise would often be beyond their reach. It was in line with the previous work of the department in making, without charge, bacteriologic examinations for the diagnosis of diphtheria. In carrying out this measure well-stoppered two-ounce glass jars are supplied at more than 200 apothecary shops, scattered at convenient points throughout the city. These places are already familiar as depots for the distribution of culture outfits for the examination of diphtheria. With the jars are delivered circulars containing directions as to the collection of sputa.

The daily comparison of the certificates in which death is ascribed to tuberculosis with the indices of reported cases shows that at the present time nearly 80 per cent. of those dying from tuberculosis in the Borough of Manhattan have been previously reported to the department (while living) as suffering from this disease.

In the prosecution of the work as above outlined certain difficulties have been encountered. These mainly relate to the obtaining of a full registration of cases. As yet many private physicians do not report their cases of tuberculosis, although more and more cases are being constantly reported, and the data in a constantly increasing number of cases are being obtained through the sputa examinations. The reports from institutions naturally furnish the largest proportion of the cases recorded, and such reports are in some instances inaccurate. Many cases escape detection on account of the inefficient examination given patients. Incipient tuberculosis is frequently not diagnosed in dispensaries, and occasionally an erroneous diagnosis of tuberculosis is made. The addresses, also, given in many reports need revision. Patients frequently give their addresses wrongly through intention, and perhaps as frequently the clerk records the address incorrectly. Naturally, therefore, many false addresses reach the department and are excluded from the records only by the search of the inspector. Rarely in death certificates pneumonia and chronic bronchitis are given as the cause of death to conceal cases of tuberculosis. An investigation is now made of every death occurring in persons over 15 years of age, to determine if the patient has been previously reported as suffering from tuberculosis, and occasionally such previous reports have been found.

The obvious results of the work done thus far lie both in the reduction of the death rate and in the evident effects in the education of the people as to the infectious nature of tuberculosis and the means to be taken for its prevention, and in the destruction of sources of infection by the renovation of infected apartments. It may be doubted whether any considerable degree of popular information as to the necessity of care for the sputum can be diffused through the non-English speaking inhabitants of the poorest tenement-house districts, recruited as they continually are by fresh supplies of the most filthy and ignorant classes from all parts of Europe; but in the better class of tenements, where the inhabitants speak English, there has been such a spread of knowledge concerning the nature of this disease that in a majority of the cases in many districts the inspectors now find at their first visits that all the precautions advised have been already taken.

Another perhaps not unimportant result of the work in New York City is the influence on the action of other sanitary authorities. Similar measures have been adopted by the New York State Board of Health, and the measures and circulars of the New York City Board

of Health have been closely followed by sanitary authorities in many other cities, both in this country and abroad and by state boards in other states. Still the work of restriction of tuberculosis even in New York has but just fairly begun. Among the most pressing needs of the future are larger and better equipped hospitals for the treatment of advanced cases, municipal sanatoria outside of New York, for the care of incipient cases, the inspection of factories, shops, and all other places where phthisical patients may be found, and a more strict enforcement of the sanitary ordinance prohibiting spitting in these places, in all places of public assembly, in the public halls of lodging houses, hotels and tenement houses, and in the means of public conveyance.

The death rate from all tuberculous diseases in the boroughs of Manhattan and the Bronx (old New York) was as follows: 1886, 4.42; 1887, 4.06; 1888, 3.99; 1889, 3.86; 1890, 3.97; 1891, 3.55; 1892, 3.51; 1893, 3.16; 1894, 3.35; 1895, 3.11; 1896, 2.98; 1897, 2.99; 1898, 3.08; 1899, 3.08; 1900, 3.01; 1901, 2.89.

The diminution in the death rate, as shown in the above table, still continues. During the first six months of 1902 4,673 deaths from tuberculosis occurred, equaling a reduction of 10 per cent. on the death rate for 1901, which was the lowest ever recorded, not only for the whole year, but also for this period of the year. It seems evident that sure progress is being made, and that with the cordial support of the medical profession, as a whole, which is now freely accorded by the best elements in the profession, followed as this must be by the universal popular appreciation of the true nature of tuberculosis, in place of the unreasoning fear or careless ignorance which has largely prevailed, we may confidently anticipate as the result of continued effort the almost complete eradication of this, the most fatal disease with which sanitary authorities have to deal.

DISCUSSION.

DR. S. A. KNOPP, New York.—The inauguration of the anti-tuberculosis measures in New York City commenced with Dr. Biggs writing that popular leaflet of instructions regarding the prevention of consumption, which has since been copied by so many cities and states and even by foreign countries. It was originally issued in German, Italian and Hebrew, and was largely distributed throughout the tenement districts of New York. It has very properly been looked on as a model by boards of health engaged in the preparation of such instruction leaflets. In regard to reporting cases to the board of health, I can endorse what has been said by Dr. Biggs. While seemingly compulsory the ordinance in reality makes it optional. Every physician is left free to deal as he pleases with his own cases. There is no interference if the physician does not desire it, and there can not be the slightest objection to reporting cases under such conditions.

Through this system of reporting cases the board of health collected a great deal of valuable information concerning affected districts, and in this way was able to get remedial measures employed. Dr. Biggs has not mentioned one of the most important results which came from the inauguration of this work. I refer to the tenement-house committee. It was shown by the statistics collected that very many cases of tuberculosis existed in certain congested districts. The result was that a most vigorous agitation for tenement-house reform was started and that we have now one of the best tenement-house laws that ever existed. Houses where there is no light and no air and where the sanitary conditions are bad are no longer tolerated. I was exceedingly pleased to hear Dr. Biggs point out the difference between contagious and communicable diseases. He is my teacher—I am proud to recognize him as such, and I know the great pains he has taken to bring this matter before the public. Tuberculosis is not a contagious disease, but a communicable one—the touch of the consumptive is not danger-

ous. Sanatoria are the best places in which not to catch consumption. You can not say the same of smallpox, which is contagious, and the distinction is one which it is important to bear in mind. Tuberculosis is a communicable, preventable and curable disease, but I repeat not contagious, that is to say, transmitted through contact *per se*. From the way some people, including physicians, have treated this subject it would seem that we have to recognize the existence of a new disease, which might very justly be called phthisiophobia. It is a disease from which many people have been suffering of late.

In regard to another matter of great importance and moment concerning efficacious prophylaxis, I should like to make a suggestion. After a death from tuberculosis is reported to the board of health we hear complaints that there is sometimes considerable delay before an inspector can visit and fumigate the premises. Would it not be possible to utilize the telephone or the telegraph in such cases, even if the health department paid the expenses? Delay is dangerous; poor people will remove bedding and clothes.

I am also very much in favor of the establishment of city dispensaries for the express purpose of dealing with ambulant tuberculous cases. It seems to me that such institutions would be of great value as educational and preventive factors as well as in other ways.

DR. P. M. CARRINGTON, Ft. Stanton, N. M.—I would like to ask the Doctor whether he has provided any public places where the public may spit. People, at all events some people, must spit somewhere, and if you do not provide any accommodation for them they will spit on the street. I notice that in New York City a distinction is drawn between the sidewalk and the street, but the sputum may be as dangerous in the one place as the other. If you could devise a scheme by which you would have a sufficient number of destructible receptacles you would get rid of a great deal of material which otherwise may carry contagion.

DR. J. W. GUEST, Louisville, Ky.—It so happens that Dr. Biggs' name is on my diploma also, but, apart from that, I have taken a great deal of interest in the campaign against tuberculosis which he has been carrying on. My report in regard to what we have been doing in Louisville must be very meager. The only thing we do is to send postal cards to physicians asking them to notify us of cases of tuberculosis, and the poor cases we isolate as far as possible in the city hospital. Apart from this, and the free examination of sputum, we do nothing directly in regard to consumption, but we are paying more and more attention to the enforcement of the pure food laws, and thus what we neglect in regard to the former we more than make up in the latter.

DR. B. W. STEARNS, Binghamton, N. Y.—Some encouragement is no doubt to be derived from the statistics quoted by Dr. Biggs, which show a decrease in the proportion of deaths from tuberculosis, but there was one point he did not touch on at all. A good number of the tuberculous patients of New York City remove to Sullivan County and not a few of them die there and their deaths are certified in that county and not in the city. Personally, I know of several cases of the kind during the year 1900, though I am not aware whether or not they are sufficient to affect the percentage.

DR. C. B. JOHNSON, Champaign, Ill.—The Doctor said he used carbonate of soda instead of some more powerful disinfectant. I should like some further particulars—both as to the reason for using the mild disinfectant and the manner of using it.

DR. A. R. REXNOLDS, Chicago—This question of whether tuberculosis should be made a reportable disease is one that has agitated officers of health in this country and abroad for a long time. The profession of Chicago up to this time have never felt that this ought to be done, and officially, as commissioner of health, I have never been able to bring myself to the point of deciding that the disease should be made reportable. The chief objection that we have to doing so is that alluded to by Dr. Biggs, viz.: that it puts tuberculous patients in the same class with those suffering from contagious diseases. A tuberculous patient may live for twenty years following some useful

occupation and mingling with his fellow creatures without any injury or danger to them, provided reasonable care is taken of his sputum. He ought not to be branded as a leper, or classed with patients suffering from smallpox, bubonic plague and other contagious diseases. If a consumptive, and the general public could be brought to understand that there is no danger from contact with a consumptive person—that the disease in short is not what is usually considered contagious—the objection to making it notifiable might ultimately die out. Even in England we know that there has been a great deal of difference of opinion on this point. To me it seems that each community must regulate it according to its own needs. In New York City the reporting of tuberculous cases under the conditions described has proved a good thing, but whether it would be a benefit to other communities differently situated is a question on which much could be said, and I repeat that it seems to me that every community must decide the matter for itself.

I commend most heartily the paper of Dr. Biggs in its entirety. The figures are most striking and convincing, and demonstrate the undoubted advantage of reporting such cases in New York City. Although we have a large population in Chicago it is not so congested as in New York. It is most dense in the sixteenth ward, but there are very few tenement houses such as are known in New York. The buildings are nearly all detached two-story houses, with light and ventilation on all four sides.

The great advantage that has been derived from this pioneer work of the New York Board of Health, lies in the influence it has exercised and the stimulus it has brought to bear on other places. This influence is not bounded even by the confines of the country. In several countries of Europe it has also been felt, and at the tuberculosis congress in London last year Dr. Biggs' name was mentioned by the celebrated Koch himself as that of a man to whom all sanitarians were indebted.

For the present we must leave each community to decide for itself such matters of detail as placing the disease on the reportable list. One other objection occurs to me in regard to making tuberculosis reportable and that is, that if the disease is reported it is implied that the authorities will do something. If these cases are simply reported and a record made of them no great good will be done. Yet in Chicago that would have to be the result at present for lack of men and means. No doubt if it could be reported without giving offense to the patients and without doing harm to any one it would be very desirable. It may come to that, but we must not go in advance of public sentiment; we must try to do the best we can under existing circumstances. We in Chicago rely largely, as Dr. Biggs has mentioned, on taking the public into our confidence through our bulletins of information. We are in the habit of issuing a bulletin each week. It is printed in the daily papers and the publishers give us as many galley proofs as we wish for distribution. One editor told me that the bulletin is regarded as one of the most important items published in the Chicago papers on Monday mornings. It is extensively copied and commented on. All of which shows that the importance of public health is growing daily in public estimation. The people are becoming more interested in it and getting into the way of discussing it more intelligently. For a time there seemed danger that the unreasonable fear of germs would do harm, but this is an evil which has to a large extent cured itself. I am glad that Dr. Biggs made the point that consumption, so far as contagion is concerned, is not the dangerous disease that it is supposed to be, and I have no doubt that once it comes to be understood that the object of reporting is not to hamper the movements of a tuberculous patient, but is really to benefit him, and allow him full liberty so long as he takes care of his sputum, their objections to reporting the disease will be very largely withdrawn.

Dr. BIGGS.—In regard to the reportability of tuberculosis it seems to me that we must get away from the idea which has prevailed among medical men and sanitary authorities, as well as among the public, that reported diseases are necessarily contagious. In my opinion all diseases which are in any sense preventable should be put on the reportable list. It is neces-

sary to get rid of the idea that the fact of their being so dealt with indicates that they have to be classed with smallpox and other diseases of that kind. In New York City we have passed a resolution in favor of putting malarial fever on the reportable list, and of course we do not propose to put it in the same class with the diseases referred to, nor do we propose to interfere with physicians handling their own cases in their own way. All we want is to obtain information as to where these cases occur so that we can gather data as to the sanitary conditions and surroundings, and in this way obtain something to go on in our enquiries as to the underlying causes of the disease. In some of the outlying boroughs where malaria exists to a greater extent than on the island of Manhattan we found that the presence of stagnant water was an almost constant condition, and in some of these districts it appeared that almost every person had been, or was, affected by the disease. We want reports of these cases in order that we may be able to remove the objectionable conditions and so prevent the extension of the disease. A proposition has also been made to make pneumonia reportable, and I certainly think it ought to come within the class. We know the destruction of life that is caused by the disease. We also know more or less how to treat it. But we want to know more about it epidemiologically. We can only do this if we first of all get information as to its distribution in large centers of population. Eventually, in my opinion, all infectious diseases—all diseases which are produced by micro-organisms—will be recognized as reportable, which means that we will get away from the idea that only those diseases should be reported which involve danger by simple contact.

A word in regard to dispensaries: I heartily agree with Dr. Knopf as to their value and necessity, and I may say that we have under consideration a proposition for the establishment of such institutions under the department of health. The plan has not been worked out yet, but the problem is one of those which we hope to solve in the early future.

In regard to the distribution of sputum in public places I do not quite agree with Dr. Carrington that it is as objectionable on the street as it is on the sidewalk. The special danger from sputum on the sidewalks lies in the possibility of its soiling the clothes, especially of women, and of being thus carried (as well as by shoes) into the household. When it is deposited on the street and mixed with the soil and exposed to the light I do not think it is so much a source of danger. It is rather a general nuisance than the source of special infection. On the other hand, great danger is to be apprehended from indiscriminate expectoration in halls and on stairs of buildings used for educational purposes or amusement. It is in these places that one finds the really dangerous centers of infection. If the sputum is deposited on the street it is clear that it can not be nearly so dangerous. All our regulations should, so far as possible, be carried out on grounds of general cleanliness. In ferry boats we require that proper receptacles be provided. Perhaps they are not all they should be, but for the time they are the best we can get.

As to disinfection, the difficulty of the problem is this, that although we have an appropriation it is not sufficient to enable us to cover the work. When we have 400 or 500 cases of tuberculosis to deal with each week and from 1,500 to 2,000 cases of contagious diseases a week are reported the magnitude of the problem of inspection and disinfection becomes apparent. This is the cause of the delay which has been referred to. We have not the force or the facilities necessary to enable us to deal promptly and properly with this phase of the question.

With regard to my advocacy of soda solutions my idea has always been that real cleanliness was preferable to probably inefficient disinfection. Therefore, I say that in the majority of instances hot soda solutions will be found much more satisfactory than bichlorid or any other disinfectant, as used. We should encourage the people to clean rather than to use disinfectants.

As to the reliability of the statistics I have quoted there seems to be no way by which we can eliminate all sources of error. But there are always two sides to a question, and while it may be true that a good many people leave the city when they

are ill and die outside its boundaries, it is no less true that a great many others come to the city sick and die there. This matter has been gone over very carefully, and the conclusions arrived at are that the deaths of this kind taking place in and out of the city pretty well balance each other. After all, however, the number of such cases is so small that it could hardly be expected to affect the percentage. As to the admirable work done by the Chicago Board of Health by means of its weekly bulletin—which is a model publication of its kind—I may say that we have under consideration the adoption of some similar plan for the weekly discussion of sanitary problems. Before closing I would like to say a word as to the excellent work which has been done by Dr. Knopf, and the enormous influence his writings have had in extending a knowledge of tuberculosis and the means to be taken for its prevention and cure.

A PECULIAR CASE OF RECURRENT BULLOUS ERUPTION.*

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It may well be that the case which I shall briefly describe is of a type not unusual in some localities, or that it is not infrequently seen by those who practice in pediatrics. But I have never come across one precisely similar, and its characteristics, both positive and negative, are such that I am unable to classify it under the heading of any of the ordinary dermatoses. These considerations embolden me to place on record the following case:

Mamie K., 5½ years old, was brought to my clinic at Lebanon Hospital, with the following history: Since her second year there has appeared each autumn a skin eruption similar to the one that is now present; during the spring and summer there is absolutely nothing the matter with her integument. Each attack began with the appearance of a few watery blisters, which increased up to a certain size, and then either ruptured or dried up. From time to time new ones appeared, thus prolonging the course of the disease to several weeks or months. Then, quite spontaneously, the blisters ceased to form and the child was well. Subjective sensations were entirely absent, so that the child had had no treatment at all; and the sole reason that she was now brought to the clinic was the fact that the accident of location of some lesions in this attack does give her trouble. The first attack occurred in her second year; there were only two or three small bullæ on the backs of the hands, and the eruption lasted but a short time. The second attack in her third year was a little worse; there were more blisters, their size was larger, and the eruption lasted longer. In the attack of the fourth year the forearm and legs were affected, as well as the hands, and the severity of the symptoms was increased. The present fourth attack is the worst that she has ever had. It has been present since September (over three months); the blisters are larger than they have ever been; some have appeared on the mons veneris and abdomen, and there have been a number of lesions on the buttocks, thighs, legs and arms. Each one takes two or three weeks to run its course, instead of a week, as did the early ones; and new efflorescences are continually coming out, so that since this attack began, there have always been some score or two of lesions present in various stages at least. Within the last few days some large blisters had appeared on the ankles and soles; and the child had been unable to walk on account of the pain that they occasioned.

There had been neither itching nor pain before or after the appearance of any of the lesions. Most of them were accidentally discovered when the child was being dressed or bathed. When rupture of the bullæ had occurred, the skin beneath the detached epidermis was found moderately reddened, but not especially sensitive; the mother usually applied a bandage to

the part for a day or two. There has never been any apparent relationship to pressure or other injury; the blisters have not been commoner around the ankles or waist or on the knees or elbows, than elsewhere; they have never come on after a fall or a bruise. There are no other children in the family, and the mother can give no history of any relative on either side of the family having been similarly affected.

Examination showed the child to be perfectly healthy as regards her internal organs. She is a fairly robust girl of the blond Germanic type, and is physically and mentally normal. The lesions present were almost all on the lower limbs; there are some 50 of them from the hips down. The great majority of these, however, were only the dried remains of smaller blebs, or the fading marks of older ones. There were large bullæ, however, just below the right internal malleolus, on the inner edge of the sole of the left foot, and on the upper thighs. These were the new ones that had appeared during the last few days. On the mons veneris, lower abdomen, and arms only the stains of vanished lesions were apparent.

In the weeks following this first examination, I had abundant opportunity to watch the development of the bullæ from their beginning. Without any local prodromal symptoms, either subjective in the shape of itching, formication or pain, or objective as redness, elevation or whealing, there would appear a minute vesicle, tense, globular, and filled with a trans-



parent yellow serum. This would rapidly increase in size, becoming as large as a bean in 24 hours, and walnut-sized or over in from two to three days if it was not accidentally ruptured. In the case of the bulla of the sole I took care to prevent this happening; and it grew to be as large as a goose-egg, and stretched across the sole. I was then compelled to rupture it on account of the disability that it occasioned the patient. After rupture of the largest bullæ the epidermis could be removed at once, since epithelial repair had largely taken place under it, and the surface was not sensitive.

All attempts on my part to produce bullæ by friction, pinching, etc., were fruitless, thus confirming the mother's statement as to the spontaneous origin of the lesions.

Knowing from the previous attacks that the disease was self-limited, I did not deem it necessary to institute any very vigorous treatment, and put her on moderate doses of arsenic. In January the lesions began to become less frequent, and late in February they ceased to appear. During this period I made it a practice to rupture the bullæ early, and none of them attained any very large size.

Here, then, was a recurrent bullous eruption in a child, coming on in the fall of four successive years, running a definite course, and unaccompanied by the other symptoms usually met in lesions of this nature. It was certainly not an epidermolysis bullosa, for there was no hereditary history, no relationship to injury, and the disease ran a definite course. It was not a

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Cutaneous Medicine and Surgery, and approved for publication by the Executive Committee: Drs. W. T. Corlett, L. Duncan Bulkley and W. L. Baum.

bullous urticaria, for there was no itching, and there never were any other urticarial lesions on the child's body; and a similar argument holds for a bullous erythema. Dermatitis herpetiformis is grouped and inflammatory; this eruption had neither of these characteristics. In a female adult an artificial (cantharidal) eruption might be thought of, but it is not possible that a child of such tender years would produce them, and I am very sure that her mother did not do so. I should hesitate to call it a benign pemphigus, on account of its periodicity and the absence of an inflammatory areola around the bullæ. Yet this latter designation is apparently the one that would fit it best, and is the one that I should select, if compelled to make a choice.

DISCUSSION.

DR. L. WEISS, New York—I would like to ask Dr. Gottheil what treatment he has pursued. I saw, in consultation, a similar case of a woman aged about 50, feverish and in a low condition. She had two blebs, one on the outside of the left malleolus of the size of a hen's egg, and a smaller one on the right wrist. I recommended simply a zinc-gelatin varnish, and in a few days under this occlusive application the denuded surface cleared itself, and within ten days the suppurative symptoms subsided, and the integument was replaced.

DR. JAY F. SCHAMBERG, Philadelphia—I should like to report a remarkable case which this paper calls to my mind. I saw a few weeks ago a colored man, aged 21, who exhibited on the palms of the hands and on the fingers numerous blebs varying in diameter from 1 to 2 cm. Lesions of a similar character were present on the lips, tongue and buccal mucous membrane. In the beginning of the attack the patient was obliged to subsist on liquid food owing to difficulty in swallowing. The patient had experienced three distinct attacks of this same character at intervals of six months and a year; in all of these the same regions were involved. The patient had had syphilis. There are many bullous eruptions which are most obscure in their nature and extremely difficult to classify. Many of these are being thrust into the class of dermatitis herpetiformis, thus extending the limits of this disease beyond the boundaries established by Dühring.

DR. M. L. HEIDINGSFELD, Cincinnati—Cases of bullous eruptions are always a matter of peculiar interest by virtue of their obscure nature, and in discussing this paper I wish to briefly mention a case, not only because it is of particular interest to me, but also to determine whether or not any of my fellow members have had a similar experience. A case which has been recently reported to the *Cincinnati Lancet-Clinic* (Aug. 2, 1902) under the name of "Epidermolysis Bullosa (Facilitia)" or traumatic α -ray bullous dermatitis, was exposed to the rays during three sittings of five minutes each, and was followed by slight erythema and a marked tendency to bullous formation over areas subjected to slight trauma. To all intents and purposes this case could be called an artificially-induced case of epidermolysis bullosa, through heredity, its beginning in early infancy and other features were lacking, as in some of the recorded cases of traumatic bullous eruption. The blood showed no variation from the normal, and incidentally I would like to ask Dr. Gottheil if the blood examination, or the contents of the bullæ in his case, showed any interesting changes.

DR. DAVID LIEBERTHAL, Chicago—I have seen a case similar to that of the essayist, through the courtesy of Dr. I. A. Abt. Soon after birth the child exhibited bullæ in the mouth and on the lower extremities. These bullæ had a thin roof and clear contents and soon broke down, healing taking place in a few days. The presence of scars near the ankles was strongly suggestive of syphilis, but no other symptoms were present supporting this supposition. At intervals of months new blebs appeared on the lower as well as the upper extremities, pursuing the same course, although the mouth remained free. The number of blebs at each eruption was limited to from one to three. This case, too, is difficult of classification and further observation might lead to its proper interpretation.

DR. GOTTHEIL—I presented this case as an example of a clinical type with which I was not familiar. In response to the first question I would say that it was undoubtedly self-limited; each of the previous attacks ended spontaneously, without any treatment at all; and the one that I observed had practically no treatment either. I have not seen anything similar from exposure to the Roentgen rays, but I know that such have been recorded. The bullous eruption from α -ray exposure, however, comes on very slowly, lasts a long time, and leads to very intractable ulceration; here the individual bullæ lasted but a very few days, were superficial, healed spontaneously without destruction of tissue, and the malady was prolonged by the appearance of new bullæ on other parts. Besides this, there had never been any exposure to the rays.

The diagnosis apparently lies between a benign pemphigus and a bullous erythema, with some very cogent arguments, however, against the adoption of either designation. It is for this reason that I have regarded the case as worthy of record.

Havana Leper Hospital.—At the meeting of the Orleans Parish Medical Society, Oct. 11, 1902, Dr. Isadore Dyer gave an interesting account of his visit to the Havana Leper Hospital. Although founded in 1681, the Hospital San Lazzaro assumed importance only in 1861, when the present imposing building was erected. This occupies a prominent position on one of the main thoroughfares only a few hundred yards removed from the bay front and opening on a broad plaza. The entrance from the street discloses a large chapel for the use of the public, to which the patients in the hospital have access in a reserved space just off the chancel, separated on each side by high iron railings, one side for females, the other for males. There are in all 114 patients, mostly native, and about equally divided between male and female; only a few children, the youngest about eight years, and only a few negroes. Quarters for the two sexes are separately arranged and a distinct infirmary is provided for those lepers who become ill or some concurrent malady. Seven sisters of charity are in charge of the nursing and domestic departments, and help is received, not required, from those patients who are able to render it. The whole establishment is cleanly and strict attention is given to ventilation and hygiene. As in all Cuban establishments, the bathing facilities are meager. Treatment at this institution seems to present about the same results as is common elsewhere. Most reliance is placed by Dr. Alfonso, the head of the hospital, on Chaulmoogra oil, and he believes his best results are obtained with this remedy. Experimental work has been done for the past eight months with red mango bark, but as yet without result. Baths of benzoinated water, sulphurated water, etc., are employed in some cases. Carasquilla serum has been used and abandoned. Arsenic and bichlorid of mercury are among the other remedies chiefly employed. The salicylates and ichthyol are also used. Strychnin as a regular treatment did not seem to appeal to Dr. Alfonso as it has to Dr. Dyer, for the latter has always held strychnin as a sheet anchor in leprosy, and has never treated a case without maintaining this drug throughout, no matter what else he may have used. Dr. Dyer was struck, in the short time at his disposal to observe these patients, with the large number of pure tropic types, the sort of cases found in Brittany and in Constantinople, those cases which have led to the separation of Morvan's disease as an entity. Of all the cases shown him at the San Lazzaro Hospital, there were few of the tubercular type, the type in which the bacilli are found freely colonized. The fact that so many of the cases were natives and that they presented for so large a part the evidences of what Zambaco-Pacha has called "effetex" leprosy, possibly explains the fact that there is no instance recorded of contagion having occurred among the attendants of this institution. Altogether the appearance and detail of the Havana Leper Hospital, and it is not an asylum, impressed the doctor with the highest sense of respect for a well-organized and managed institution.

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THE CURRENT INDEX.

Much of our space this week is taken up with the index, consequently several of the departments are omitted and those that are given space are greatly reduced in quantity.

In this connection we desire to call attention to one part of the index which we issue with each half-yearly volume, as it is a distinct feature, unique to this journal only. We do this because we find that comparatively few of our readers appreciate what we are doing in this regard; and as it requires a large amount of labor, we do not want these efforts lost. We refer to the Index of Current Medical Literature. This will be found on index pages 1671 to 1698. In the index in this volume will be found for the second time the references to all the important articles in the leading foreign journals, making the index a practically complete index of the current medical literature of the world. The directions for using the index will be found on page 1671.

To make this of still more value we shall reprint this index in pamphlet form, together with all the titles of papers, name of journal in which they appeared, etc., under the title, "Index of the Current Medical Literature of the World." This will make reference easy, and will, we are sure, prove acceptable to those who have occasion to look up the current literature. We do not hesitate to say that in the near future a file of these indexes will be valuable. The price is twenty-five cents, which barely covers the cost to us.

THE IMPORTANCE OF SCIENTIFIC GUIDANCE IN SANITARY UNDERTAKINGS—A WARNING.

The comprehensive review by Professor Jordan of the present, most interesting conditions in Chicago as regards water supply, which appeared in *THE JOURNAL* last week,¹ makes highly instructive reading. People have heard and read so much about the great Chicago Drainage Canal, "the greatest engineering feat of modern times," that it comes very much like a shock when one is told by competent authority, backed by undeniable testimony, that from a sanitary standpoint the canal is a failure, a blunder; that after an expenditure of forty to fifty million dollars the city of Chicago is without wholesome water; that typhoid fever, the infallible curse of sewage polluted drinking water, still is and has been rampant in the city, which continues to be a center for

dissemination of typhoid bacilli to all parts in the surrounding country. It is humiliating and in every way unpleasant to know that the most progressive of cities should fail so utterly in its grandiose effort to render itself healthful.

But the truth in such matters should be told as directly and plainly as possible, without any sugar coating, so that proper warning is given and that other cities may profit by avoidance of the Chicago blunders. The cause of the sanitary failure of the Chicago Drainage Canal does not lie in any inability on the part of the engineers to cope successfully with the difficult problems in engineering. From the standpoint of the canal builder the canal is a creditable success. The project of a great sanitary drainage canal, which should carry the Chicago sewage into the Illinois and Mississippi rivers instead of allowing it to empty into Lake Michigan, whence the city obtains its water supply, meant in reality nothing more and nothing less than an effort to free Lake Michigan, at least in the vicinity of Chicago, from sewage pollution. It was in advising this undertaking that the projectors of the drainage canal took on their shoulders greater responsibility than was warranted by modern sanitary knowledge in general, and especially in regard to the best methods of sewage disposal and the obtaining of healthful water. It is probably safe to say that if the entire situation had been critically and carefully studied by a board of competent sanitary experts, with modern training in such matters, the construction of the present canal for drainage and sanitary purposes only would probably not have been recommended. But in the history of the present drainage canal, from its inception to its completion, the bacteriologist and scientific sanitarian is conspicuous by his absence. Does any one for a moment believe that a careful and competent study in a comprehensive manner of the local situation would have permitted the construction of the canal and its opening with a great flourish of trumpets while the sewage of a large part of the city was still emptying into the lake, which is the common source of supply for the whole city? Only incompetence and ignorance can explain such lamentable oversight as this, leaving aside for the moment all discussion of the best general principles of water supply and sewage disposal.

Then, again, as pointed out clearly by Professor Jordan, the present drainage canal in no way prevents the contamination of the lake water by the sewage of the towns at the northern and southern extremities of the city, as well as by that of those parts of the city itself. What guarantee is there that when Chicago, after years of labor and the further expenditure of millions of dollars, shall have turned its last sewer into the drainage canal, the lake water may not still be contaminated by surface drainage, by passing vessels, and, of more importance, by the sewage of cities and towns in Wisconsin and Indiana?

1. *THE JOURNAL A. M. A.*, Dec. 20, 1902, p. 1561.

There seems to be no escape from the remedy suggested by Professor Jordan, namely, sand filtration. Would that it had been resorted to long ago! We unhesitatingly affirm that the truly pitiable condition in which Chicago finds itself to-day so far as water supply is concerned, is in large measure the result of hastily entering on sanitary undertakings of wide scope without the great advantage of expert scientific guidance and careful, comprehensive study of the problems involved in all their bearings. Chicago entrusted the problem of freeing its water supply from sewage contamination to men without any special training or experience whatsoever in the branch of knowledge most important to its solution, namely, sanitation, with the result that so far its water supply has not been materially improved, even after the construction of a gigantic canal. To what extent the medical profession is blamable for this failure because its members did not interest themselves enough in the matter it is not necessary to discuss now, but it may be hoped that the present plight of Chicago will prove a warning to other cities about to embark on similar sanitary undertakings.

Medical News.

CALIFORNIA.

Sisters' Hospital Annex Opened.—With solemn ceremonies the addition to the Sisters' Hospital, Los Angeles, was opened December 11.

Personal.—Dr. Edward M. Pallette, Los Angeles, has returned from a year's trip around the world.—Dr. Thomas Nelson, recently graduated from Cooper Medical College, is the first colored graduate of that institution. Dr. Fred A. Grazer, San Francisco, recently dislocated his shoulder and fractured his left arm by a fall from a street car.—Dr. Edith H. Matzke, Stanford, has been appointed to a position in the department of hygiene at the university. Her duties will be to give hygienic and medical advice to the female students.—Dr. Julius A. Crane, Agnew, has resigned as medical superintendent of the Agnew State Hospital.—Dr. Andrew S. Lobingier, Los Angeles, has returned from a six months' tour of Europe.

COLORADO.

Deaths in November.—During November 810 deaths were reported in the state, equivalent to an annual death rate of 16.8 per 1,000. Typhoid fever caused 60 deaths, diphtheria 22, and scarlet fever 3.

New Law in Force.—The new regulation requiring all invalids boarding trains in Colorado to be provided with a physician's certificate stating that they have no contagious disease became operative December 6.

Alleged Violation of Law.—The district attorney has filed information against Mrs. Serada H. Callanan, charging her with practicing medicine without a license and with illegally attaching the letters "M.D." and prefixing "Doctor" to her name.

Comparative Morbidity.—During November 183 cases of diphtheria, 134 of scarlet fever, 46 of smallpox and 468 of typhoid fever were reported. Compared with October, this shows an increase of 76 cases of diphtheria, 22 cases of scarlet fever, and 21 cases of smallpox; and a decrease of 187 cases of typhoid fever.

INDIANA.

Thousands to Hospital.—On November 30 the relatives of the late Clem Studebaker presented \$50,000 to Epworth Hospital, South Bend, in accordance with the expressed desire of Mr. Studebaker.

Illegal Practitioners Punished.—The Circuit Court has found G. W. Ober, Indianapolis, and W. G. Richardson, Jeffersonville, guilty of practicing medicine without a license and has fined them respectively \$207 and \$47.

Smallpox.—During October 298 cases of smallpox occurred in 35 counties in the state, with 19 deaths. In October, 1901, 113 cases were reported from 9 counties, with two deaths.—On December 16 it was reported that there were 50 cases of the disease in Hammond, which had been diagnosed, as usual, as "Cuban Itch."

NEW YORK.

New York City.

Bequest to Hospital.—Among other bequests to charities by the will of the late Anne Lawrence Coleman is one of \$5000 to the babies' ward of the New York Post-Graduate Hospital.

St. Francis' Hospital.—The cornerstone of the new hospital was laid, December 8, with short and simple exercises. The new hospital will occupy all the large block in the Borough of the Bronx bounded by 142d and 143d streets, and Brook and St. Ann's avenues.

Conditional Gift to Seney Hospital.—At the anniversary dinner of the hospital, December 15, William Hulls, Jr., agreed to complete the buildings and grounds of the hospital at a cost of \$125,000 provided that prior to June 1, 1903, the sum of \$50,000 be raised in bona fide subscriptions.

Schedule for Dr. Lorenz.—Dr. Adolf Lorenz reached New York City on December 13. On Monday afternoon, December 15, he held a clinic at the Hospital for Ruptured and Crippled; on Tuesday a clinic at the New York Polyclinic; on Wednesday at the Post-Graduate Hospital; on Thursday at the Cornell Medical School; on Friday at Bellevue, and on Saturday at the College of Physicians and Surgeons.

OHIO.

Itinerant Arrested.—W. B. Georgia, an itinerant medicine man, was recently arrested at Findlay on the charge of practicing medicine without a license from the state. He was released on \$100 bonds.

Resolutions Regarding Dr. Carpenter.—At the meeting of the Ohio Medical University board of trustees, at the Park hotel, resolutions were adopted on the death of Dr. Eugene G. Carpenter, late superintendent of the Columbus State Hospital, who was a member of the university faculty.

Polyclinic.—The staff of the new polyclinic is announced as follows: Drs. Henry A. Ingalls and Travis Carroll, surgery; Drs. Edward M. Keefe and Frederick Bacharach, medicine; Drs. Samuel Rothenberg and L. J. Clark, obstetrics; Dr. Oscar W. Stark, eye and ear; Drs. Adolph Morgenstern and William D. Haines, nose and throat, and Drs. Edwin S. Ricketts and Charles T. Pearce, abdominal surgery.

PENNSYLVANIA.

Equips Surgical Ward.—At a cost of several thousand dollars, Col. G. S. Beck has presented the surgical ward of the Reading Hospital with an entire new equipment.

Contract Awarded.—The contract has been awarded for \$125,000, to build eight steel and glass pavilions for the treatment of consumptives at the Philadelphia Hospital.

Pathologic Exhibit.—The annual exhibition meeting of the Philadelphia Pathological Society was held December 11, in the Mutter Museum of the College of Physicians. There were good displays of series of microscopic specimens, but the exhibit of a series of gross specimens was most excellent.

Insects and Disease Transmission.—On December 12, under the auspices of the Stillé Medical Society of the University of Pennsylvania, Dr. L. O. Howard, entomologist of the Agricultural Department at Washington, gave a very excellent illustrated lecture on "Some Insects Concerned in the Transmission of Disease." The speaker dealt chiefly with the mosquito in the transmission of malaria and yellow fever.

Deaths.

Josiah W. Lash, M.D. Columbus (Ohio) Medical College, 1878, a member of the American Medical Association, died at his home in Chillicothe, Ohio, December 12, from angina pectoris, aged 50.

James F. McCone, M.D. University of California, San Francisco, 1892, a member of the American Medical Association, died in San Francisco, December 7, from tuberculosis of the hip, aged 31.

Joseph Charles, M.D. College of Physicians and Surgeons, Baltimore, 1881, died at Newport News, Va., December 12, from gastritis, aged 49. He was a member of the American Medical Association.

Adelbert F. Coope, M.D. University of Michigan, Ann Arbor, 1870. a member of the American Medical Association, died in Oil City, Pa., December 14, from cerebral hemorrhage, aged 58.

Thomas R. Veazey, M.D. Kentucky School of Medicine, Louisville, 1885, of Milan, Ind., died at Pittsburg, Pa., December 10, from anemia following malarial fever, aged 45.

Bartus Trew, M.D. College of Physicians and Surgeons, Baltimore, 1890. died at his home in Baltimore, December 12, from endocarditis, following rheumatism, aged 33.

Francis F. Forwood, M.D. University of Maryland, Baltimore, 1892, of Chester, Pa., died suddenly from heart disease, in Mecklenburg County, Va., December 8, aged 34.

William W. Miller, M.D. Western Pennsylvania Medical College, Pittsburg, died at his home in East End, Pittsburg, December 14, from typhoid fever, aged 36.

Lucius W. Baker, M.D. New York University, New York, 1880, died at his home in Baldwinsville, Mass., December 7, from valvular heart disease, aged 50.

George M. Van Dyke, M.D. Jefferson Medical College, Philadelphia, 1888, died from apoplexy at his home in West Newton, Pa., December 13, aged 44.

Dennis Nunan, M.D. University of Michigan, 1867, and Trinity Medical College, Toronto, 1869, died at his home in Guelph, Ont., December 12, aged 63.

Joseph Adolphus, M.D. Pennsylvania Medical College, Philadelphia, 1849, died from rheumatism at his home in Atlanta, Ga., December 9, aged 88.

John McKinley, M.D. Jefferson Medical College, Philadelphia, died at his home in New Wilmington, Pa., from paralysis, December 12, aged 67.

Homer C. Valentine, M.D. Starling Medical College, Columbus, Ohio, 1898; died from tuberculosis at his home in Stouts-ville, Ohio, December 8, aged 32.

Frank H. Green, M.D. Syracuse (N. Y.), University, 1892, a coroner of Cortland County, N. Y., died at his home in Homer, December 7, from pneumonia.

Alfred J. French, M.D. Vermont Medical College, Woodstock, 1848, died at his home in Lawrence, Mass., December 1, from acute gastritis, aged 79.

William B. Lindsay, M.D. University of the Victoria College, Cobourg, Ont., 1869, died from apoplexy, December 9, at his home in Strathroy, Ont.

Levi J. Hixon, M.D. Trinity Medical College, Toronto, 1888, died at his home in La Salle, N. Y., from carbolic acid poisoning, December 4, aged 42.

Ferdinand Venn, M.D. University of Pennsylvania, Philadelphia, 1892, died suddenly from heart disease in Chicago, December 17, aged 32.

William M. Fulkerson, M.D. New York University, New York, 1881, died at his home in Ingleside, N. Y., December 7, from typhoid fever.

Thomas O. Brewer, M.D. Louisville (Ky.) Medical College, 1881, died at his home in Monroe, La., December 14, aged 51.

John T. Hammond, M.D. Jefferson Medical College, Philadelphia, 1852, died at his home in Berlin, Md., December 6, aged 72.

John W. Gaston, M.D. Hospital College of Medicine, Louisville, 1890, of Troup, Texas, died December 4, from heart failure.

E. B. Davis, M.D. Western Reserve University, Cleveland, 1884, of Kirby, Ohio, died suddenly from heart disease, December 12.

John S. Lewis, M.D. College of Physicians and Surgeons, Baltimore, 1879, died at Weston, W. Va., December 15, aged 43.

Darius D. Deppen, M.D. Pennsylvania Medical College, Philadelphia, 1853, of Bernville, Pa., died December 8, aged 70.

Edward D. Wright, M.D. University of Tennessee, Nashville, 1882, died at his home in Nashville, December 9, aged 55.

Edmund M. Landis, M.D. Rush Medical College, Chicago, 1875, died in Chicago, December 14, from pneumonia, aged 56.

Benjamin Benoit, M.D. New York University, New York, 1877, died at his home in Lowell, Mass., December 7, aged 55.

John Ring, M.D. Rush Medical College, Chicago, 1888, died at Chicago, December 14, from heart disease, aged 74.

James Bartlett, M.D. University of Louisville, Ky., 1878, died at San Antonio, December 13, from sepsis.

Societies.

NORTHWEST MEDICAL SOCIETY OF PHILADELPHIA.

Monthly Meeting, held Dec. 2, 1902.

The President, Dr. Wendell Reber, in the Chair.

Rheumatic Tonsillitis in Children.

DR. JOHN STEWART divided tonsillitis into catarrhal and rheumatic, and stated that while many writers asserted the condition was confined to the membranous portion of the glands many cases had come under his observation which had involved the entire gland. The disease may occur at any age, although most frequent in children between 5 and 15 years of age; the attacks are usually recurrent, with a varying length of time intervening; oftentimes there is a family predisposition. The disease is frequently accompanied by muscular and especially articular rheumatism, and may partake of the nature of an epidemic, more particularly during the rapid weather changes in the fall. It is generally due to a rheumatic poison in the circulation, but chronically enlarged tonsils are very apt to assume this state on the slightest provocation, such as exposure to cold, wet, etc. The symptoms are a sudden onset, severe chills and fever, thirst (due to lessened secretion from the tonsils which afterward becomes increased, but is of a thick tenacious character), headache, loss of appetite, coated tongue, bad taste in the mouth, foul breath, painful deglutition, almost constant desire to clear the throat, and inflammation which has extended to the uvula. Ofttimes there is also earache due to inflammation extending up the Eustachian tube to the ear; and in the severe attacks the liquid nourishment is forced through the nostrils when the child attempts to swallow, owing to the infiltration of the muscles of the palate with serum. The condition may be either unilateral or bilateral, and although only one side is involved at first, it may later extend to the other as well.

The chief difficulty in diagnosis is the differentiation between this disease and diphtheria and pharyngitis, the distinctive features being that in rheumatic tonsillitis the onset is more sudden, the temperature higher and the redness of the throat more diffuse than in diphtheria; and in tonsillitis the yellowish-white spots can be removed from the crypts and will disappear in about two days, while in diphtheria they will continue to reform for one or two weeks. In pharyngitis the extent of the inflammation is greater than in tonsillitis, involving practically the whole pharynx.

In the beginning of the attack calomel, salicylic acid or sodium salicylate will often prevent suppuration, shorten the attack and relieve the pain and inflammation. When the disease has advanced to about the fifth or sixth day ammoniated tincture of guaiac was thought to give almost immediate relief. Local applications of peroxid of hydrogen were recommended after the beginning of convalescence and tincture of ferric chlorid and potassium chlorate to reduce the tissues to their normal size. If suppuration occurs, hot applications should be applied and the abscess opened; the diet throughout the attack should consist principally of gruels, etc.

DISCUSSION.

DR. WILLIAM L. PEPPER felt that there were but few cases of true rheumatic tonsillitis occurring in children, the majority of cases of tonsillitis being caused, in his opinion, by the formation of lactic acid in the stomach, which on its absorption by the tonsils produced inflammation. He recommended local applications of hydrogen peroxid, which tends to antisepticize and oxydize the parts and thus prevent the absorption of germ excretion, biniodid of mercury and in the beginning stages of the disease free purgation by the use of 1/10 of a grain of calomel every five minutes until 1 grain is given.

DR. A. B. KIRKPATRICK believed most cases of tonsillitis were caused by some infection, which is particularly apt to occur when the organs are enlarged and adenoid tissue present. In his experience very few cases of the true rheumatic variety have been observed in children, one reason for this being the fact that children are not, as a rule, excessive meat eaters, which

has some tendency to the production of a rheumatic diathesis. With a family predisposition to a rheumatic or uric acid diathesis, the condition would be more likely to occur. Frequently in a child with enlarged tonsils a slight cold will cause an onset of the disease. Many cases due to indigestion will yield in 24 hours to calomel, phenacetin and bicarbonate of soda. If there is enlargement of the submaxillary or sublingual gland local applications of ice will be of value. Ammoniated tincture of guaiac, iron and chlorate of potash were felt to be of little if any value, and the former, in addition to being of little if any benefit to the disease, was very apt to produce a disordered digestion. In rheumatic tonsillitis, biniodid of mercury and the salicylates were recommended and in cases of abscess formation local applications of peroxid of hydrogen were thought to be of value.

DR. HARRY LOWENBURG stated that in the several cases of follicular tonsillitis on which he had used biniodid of mercury the results had not been very satisfactory. He felt that rheumatic tonsillitis would be difficult to diagnose unless there was a family or previous personal history of rheumatic condition, which in the case of children he thought was more frequently manifested in the shape of growing pains than in cases of acute articular rheumatism.

DR. CARL LEE FELT agreed with the previous speaker on diagnosis. In the infectious variety, local applications are of value, but in rheumatic tonsillitis they should be strenuously avoided. Calomel, sodium salicylate and benzoate of soda are of value. Many cases, if left alone, will get well in seven or eight days. Where there is a bluish appearance of the throat, with considerable pain, no membrane and very little if any swelling, Dr. Felt thought it indicated rheumatic tonsillitis.

DR. SAMUEL WOLFE believed that there were very few cases of true rheumatic tonsillitis in which suppuration was present, those cases being usually produced by infection. Rheumatic conditions of the throat are more apt to attack the pharynx than the tonsils, thus following the rule in other parts of the body that rheumatism is more apt to attack the fibrous portions. The rheumatic variety is usually associated with other rheumatic symptoms in various parts of the body, on inspection there is usually very little if any inflammation, but a great amount of pain, which is decidedly intermittent, and the duration may be for a variable length of time. For the treatment of the rheumatic variety salicylates were recommended as a means of checking the disease for a time and in some cases will probably effect a cure, but as a rule the constitutional seat of the disease must be acted on by some other remedy. With an inflammatory phlegmonous or catarrhal condition, guaiac and the early application of ice, externally and internally, were recommended.

DR. SAMUEL P. GERHARD felt that the term rheumatic tonsillitis was rather a misnomer, except in cases where there was a history of rheumatic diathesis, and stated that in cases where the tonsils were enlarged and inflamed he had obtained good results from the application of adrenalin, administered hypodermically, if the tonsil is very large and patient will not have it excised.

DR. WILLIAM H. GOOD referred to two brothers with histories of gout, one has purpura of the rheumatic type and usually suffers from a bad attack of migraine two or three times a year, the other has rheumatic symptoms and usually has quinsy once or twice a year. Dr. Good suggested a connection between the quinsy and the rheumatic symptoms.

DR. WENDELL REBER stated that he believed the reason children so seldom suffer from rheumatic tonsillitis is the fact that they are out in the open air so much, rather than the restriction of their diet in reference to meat.

DR. STEWART stated that all the cases on which his paper was based had been cases in which the parents gave a history of a distinct rheumatic diathesis, and even although suppuration had existed in some of them he believed them to be of the true rheumatic variety. In regard to the ammoniated tincture of guaiac producing gastric disturbance, he felt that that could be avoided by giving it in connection with some other palliative substance. In regard to the use of adrenalin, he felt that as a temporary means of reducing very large tonsils it was of great

value, particularly in conjunction with a 10 per cent. solution of antipyrin, but that the result would not continue for more than five or six hours, and would need to be repeated.

Gynecologic Specimens.

DR. T. TURNER THOMAS gave a demonstration of a number of fresh gynecologic specimens, detailing the various procedures in operation in such case. The points brought up were discussed by Drs. Wilmer Krusen and Frank C. Hammond.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal, December 13.

- 1 The Past, Present and Future of the New York Academy of Medicine. Andrew H. Smith.
- 2 *Laryngectomy for Malignant Disease. Frank Hartley. (To be concluded.)
- 3 *The Present Status of Genito-urinary Therapeutics. Eugene Fuller.
- 4 *The Treatment of Extensive Rectal Strictures. Emil Ries.

Philadelphia Medical Journal, December 13.

- 5 The Therapeutic Uses of Alcohol.
- 6 *The Climate of Porto Rico—Vital Statistics of the Island. George G. Groff.
- 7 *Cholelithiasis. John B. Deaver.
- 8 *Surgical Remarks on Typhoid Perforation. Robert G. Le Conte.
- 9 A Case of Typhoid Fever with Perforation, Operation and Recovery. William Petry.
- 10 *The Treatment of Pulmonary Tuberculosis with Formic Aldehyde, and a Description of an Inhaler for Its Practical Administration. W. G. Shallcross.
- 11 X-Ray Therapy, with Report of Cases of Epithelioma, Recurrent Carcinoma of the Breast, Carcinoma of the Uterus, Carcinoma of the Esophagus, Tuberculosis of the Skin and Psoriasis. G. E. Pfahler.
- 12 *X-Ray Tube Shields and Specula for Treating Cancer of the Rectum and Other Cavities. J. Rawson Pennington.
- 13 *Acute General Infections Originating in the Lymphoid Tissue of the Upper Respiratory Tract. Symptoms and Treatment. Henry L. Swain.
- 14 The History of a Case of Intra-abdominal Extra-uterine Pregnancy Delivered at Term of a Living Child. W. L. Estes.
- 15 *Adrenal-Chlorid in Urethral Work. S. Leon Gans.
- 16 A Plea for the General Employment of Crede's Method. N. J. Weill.

Medical Record (N. Y.), December 13.

- 17 *The Roentgen Ray and Ultraviolet Light in the Treatment of Malignant diseases of the Uterus, with Report of an Inoperable Case. Margaret A. Cleaves.
- 18 *Pulmonary Syphilis Simulating Pulmonary Tuberculosis. Henry W. Berg.
- 19 *Three Phases of Pancreatic Disease, with Report of Cases. John H. Blodgett.
- 20 The Neuron Theory: Its Relation to Physical and Psychological Methods of Treatment. A. D. Rockwell.
- 21 Syphilis in the Barber Shop: A Case of Infection Through an Accidental Razor Wound. Antonio Fanoni.

Boston Medical and Surgical Journal, December 11.

- 22 *Infantile Paralysis: An Epidemic of 38 Cases. Charles F. Painter.
- 23 Congenital Anomalies of the Phalanges, with Report of Cases Studied by Skiagraphy. F. B. Lund. (To be continued.)
- 24 *Leukoplakia. Frederick C. Cobb.
- 25 *A Case of Suture of Divided Ureter—Recovery Without Leakage. Hugh Cabot.

Medical News (N. Y.), December 13.

- 26 *Malignant Disease Involving the Gall-Bladder. William J. Mayo.
- 27 *Surgical Versus Medical Treatment of Cholelithiasis. John B. Deaver.
- 28 Report on the Care of the Sick Poor of the State of New York; with Suggestions for the Establishment of Convalescent Homes, Sanatoria, etc. S. A. Knopf.
- 29 *Crede's Intravenous Injections of Silver (Collargol) in Ulcerative Endocarditis. Morris Manges.
- 30 *Remarks on One of the Complications of Anesthesia (Asphyxia). Thos. L. Bennett.
- 31 A New Compact Portable Operating Table. Howard Lillenthal.

American Medicine (Philadelphia), December 13.

- 32 *Causes of Epilepsy in the Young. A. Jacobi.
- 33 Intestinal Obstruction; Fecal Fistula, Persistent Pain, Cured by Secondary Operation and End-to-End Anastomosis. Herman Grad.
- 34 The Treatment of Epithelioma of the Eye-lids by the X-Rays. William M. Sweet.
- 35 *Some Neglected Points in the Physiology of Vision. George M. Gould.
- 36 Accessory Thyroid Tumor Situated at the Base of the Tongue. Randolph Winslow.
- 37 Dr. Bridge on the Management of the Tuberculous Lung. T. B. Moore.
- 38 Present Surgical Methods in the General Hospital Hamburg-Eppendorf. Nicholas Senn.

2. **Laryngectomy.**—Hartley describes the mechanism. The article is to be concluded in a future number.

3. **Genito-Urinary Therapeutics.**—The points discussed by Fuller are the elimination of gonococci, the dissipation of general infection from the tract, sterilization of the tract in connection with operation, and the limits to be put on the administration of anodynes. He is not sanguine in his estimation of the direct elimination of gonococci, and thinks that the expectant treatment, leaving the work to Nature, is sometimes better than the spectacular one which thwarts her. Elimination of the general infection can frequently be accomplished by surgical removal of the primary factor. In the minority of cases hygiene and drug measures will have to be used. Diuresis, drugs to inhibit germ proliferation, vesical and urethral lavage and attention to the general condition are then indicated. Among the drugs urotropin at present stands at the head. He does not any longer attempt complete sterilization of the urinary tract prior to operations, as that is impossible. He believes that ordinary and post-operative antisepsis will often be sufficient and less risky on account of the greater quickness of the operation in certain cases. He particularly objects to opium and its derivatives, thinking they increase the risk. The patient's mind should be alert; if the patient is drowsy and supremely comfortable after operation, Fuller fears uremia.

4. **Rectal Stricture.**—Ries describes a new method of relieving rectal stricture by shutting off the bowel above the stricture and pulling down on the upper portion, anastomizing it with the lower portion of the rectum. The details of the operation are described, and schematic illustrations given showing its method and results.

6. **The Climate of Porto Rico.**—Groff thinks there is no process of acclimatization to persons from a temperate climate in Porto Rico. The trade winds prevent the heat and humidity being oppressive. San Juan is a hot city on account of its being closely built with brick; in other places one needs blankets at night. There are no diseases which one from temperate latitude need fear. Tuberculosis is prevalent owing to the low state of nutrition and the less resistance of the natives. Dysentery is localized, as is leprosy. The anemia of ankylos-tomiasis is almost invariable among the poor and is spread by eating with soiled fingers. Scarlet fever is unknown. Pneumonia is seldom fatal. Malaria is rare. Yellow fever has not appeared for ten years. Diphtheria occurs, but generally in a mild form, and smallpox has been prevalent in the past. All Americans sometime contract dengue, from which they soon recover. What the people need is instruction in sanitation and better nutrition. They are honest, industrious, intelligent, law-abiding and proud of their American citizenship.

7. **Cholelithiasis.**—Deaver reviews the subject generally, and urges that the best possible time for the patient to be referred to the surgeon is when the stones are still in the bladder, that the severity of the disease increases and the case is less promising after the stone has passed into the duct and that there is practically no mortality from removal of stones from the bladder, but common duct operations are serious. He advises his medical colleagues to witness gall bladder surgery and familiarize themselves with the conditions.

8.—See abstract in THE JOURNAL of December 6, p. 1476.

10. **Formaldehyd in Tuberculosis.**—Shalleross describes a home-made inhaler by using a perforated cork and a pint salt mouth bottle, two glass tubes being passed through the perforations. To one of these is attached a rubber tube at the end of which is an inhaler made by cutting off the end of a rubber bulb. The tube is partially filled with a roll of mosquito wire gauze covered with cheese cloth, coiled up in the tube, which absorbs the formaldehyd mixture. The mixture which has given most general satisfaction consists of equal parts of 40 per cent. commercial formaldehyd and 95 per cent. alcohol. Other agents may be added as desired. About 12 drams is sufficient to moisten the gauze and leave an excess which will last for two or three months without renewing. He sums up his conclusions as follows:

As a therapeutic adjunct in the treatment of pulmonary tuberculosis formaldehyd possesses certain distinct advantages.

It is a gaseous substance, having about the same specific gravity as air with which it readily diffuses, and is soluble in water.

It is the most powerful chemical disinfectant known and the nearest approach to a pulmonary antiseptic we have.

It is a stimulant non-toxic and does not irritate the respiratory tract when administered in the proper manner.

It lessens the absorption of toxins, reduces pyrexia, relieves nervous symptoms and night-sweats and sharpens the appetite.

Cough is lessened by its property to liquefy and render more mucous the secretions, and by relieving the irritation of the pharynx and larynx.

12. **Cancer of the Rectum.**—Pennington describes a special form of x-ray tube and shield which he has employed for cancer of the rectum to obviate the difficulties usually met.

13. **Adenoiditis in Children.**—Swain describes a condition in children which he considers due to inflammation of the tonsils, especially the third tonsil, namely, common febrile attacks sometimes becoming more extended and producing serious constitutional conditions. He believes that these tissues are normal in the body, but should be removed when overgrown for mechanical reasons and on account of the possibility of their producing mischief. He does not authorize general annihilation of lymphoid tissue; but the earlier the third tonsil is removed, other things being equal, the better. It should be taken away as soon as it is known to be the cause of any trouble. For treatment he advises sprays with Seiler's tablet solution with suprarenal, and powdered boric acid in the nose as probably accomplishing a great deal in most cases. Peroxid of hydrogen should be used only in weak solution. Its prolonged use is not to be recommended, and for the constitutional conditions we should depend mainly on local cleansing, reduction of the inflammation in the throat with change of air, good food and nutrition.

15. **Adrenalin in Urethral Work.**—Gans reports cases of posterior urethrotomy treated with adrenalin with good results, in spite of the obstinate character toward other drugs. He thinks the usefulness of this drug is limited to the same indications as for mucous membranes in other localities. It needs watching for untoward action.

17. **X-Rays in Uterine Cancer.**—Cleaves details a case of cervical uterine cancer which was treated with the Roentgen ray with apparent good results.

18. **Pulmonary Syphilis.**—The probability of syphilitic disease of the lung being mistaken for tuberculosis is noticed by Berg, who reports a case which recovered under the iodids. He discusses the pathology, symptoms, etc. It may resemble tuberculosis or subacute or chronic pneumonia. It may exist in the form of gummata with more or less extensive bands, and may produce abscess cavities. He has not seen the last two classes, though he has seen several cases simulating tuberculosis or pneumonia. Its progress is really much slower than the pulmonary disease, but otherwise the symptoms are often very similar. The treatment, of course, is specific.

19. **Pancreatic Disease.**—Blodgett describes three phases. 1. Extension from disease elsewhere; 2, part of a general process; 3, pancreatic disease *per se*. Each is illustrated by cases. He thinks that pancreatic disorder may be frequently a cause of indigestion and other disorders that are not thus ascribed.

22. **Infantile Paralysis.**—Painter describes an epidemic at Gloucester, Mass., in the summer of 1900. There were 23 males and 9 females, aged from 13 months to 10 years. No case recovered entirely, but only one died, though this one was not included among the 38 reported. He does not venture to explain the cause of the epidemic, but considers several organisms capable of producing the symptom-complex. The majority of cases occurred after a period of extreme heat, and in some cases from a sudden or sharp drop from abnormally high temperature and others followed bathing in the sea.

24. **Leucoplakia.**—Cobb's article is a general review, in which he seems to hold the smoking habit to be the leading etiologic factor. Syphilis seems to have been present in some of his cases, but was not so prominent as is claimed by Fournier.

25. Ureteral Suturing.—After reporting a case which Cabot operated on by the end-to-end method he describes the various methods. He thinks the transverse end-to-end method which has been done twelve times with two deaths necessitates the sacrifice of less ureter than any other one, but it has some technical difficulties and is more likely to leakage. The oblique end-to-end has about the same limitations, though it requires the sacrifice of a small portion of the ureter. The end-in-side method of Van Hook is only applicable in cases where plenty of slack is to be had and might be impossible, but is probably as easy as any of the methods and a good deal less likely to leak. The end-in-end method is applicable where a moderate amount of ureter up to an inch can be utilized and is quite as easy as the end-in-side method and seems to have a larger range of application, requiring less sacrifice of tissue. He concludes that attempts to suture the divided ureter should always be made before it is implanted in the vagina, rectum or skin or the formerly popular operation of nephrectomy is resorted to.

26. Malignant Disease of the Gall Bladder.—Mayo finds that gallstones are almost constantly present in primary malignant disease of the gall bladder and rarely in secondary; that the relative proportion of gallstones and malignant disease of the gall bladder in women and men is practically identical, and the pathologic lesions are best explainable on the theory of the etiologic relation of gallstones to malignant disease. He reports cases which are of interest in this connection.

27. Cholelithiasis.—Deaver reviews the operations for cholelithiasis, advocating early surgical treatment. He describes the different operations and their adaptations to different conditions. If the gall bladder is but slightly diseased, cholecystotomy may be sufficient; if suppurative cholecystitis exists, cholecystotomy with drainage is required. Stone in the ducts should call for special operation accordingly. Cholecystectomy is frequently difficult, and he apparently does not advocate its general employment.

29. Ulcerative Endocarditis.—Manges reports his experience with Credé's intravenous injection of collargol in septic endocarditis, reporting two cases with recovery. He says such results are sufficiently striking to warrant further trial. He also reports two cases of ulcerative endocarditis with less good effect, the patients being unimproved.

30. Asphyxia in Anesthesia.—Bennett points out that this condition may be due to the exclusion of oxygen by paralysis of the respiratory center, by the production of some unknown condition producing cyanosis as in some chloroform cases, or by the mechanical obstruction of respiration. He notices the signs, circulatory and muscular, and suggests the use of oxygen among other remedies.

32. Epilepsy in the Young.—The causes of epilepsy in infants are reviewed at length by Jacobi, who thinks it is impossible to estimate the frequency of the condition. He mentions as possible causes, dissipation and drug habits of the parents, syphilis, intermarriage, etc., and lays considerable importance to hypertrophy of the brain and the lack of proper relation between it and the cranium and often from too early and irregular ossification. Intrauterine influences are serious in this connection. A frequent cause of epilepsy is asphyxia of the new-born and intracranial hemorrhages not connected with asphyxia which are very frequent. The frequency of convulsions of infancy and childhood is another danger, and he notices some of the causes of these, irritations, as from dentition, or phimosis, rachitis, etc. He objects to the extreme methods to prevent masturbation, and thinks they can do but little good.

35. Physiology of Vision.—Gould reviews the causes of deterioration of the function of vision by abnormal light stimulus, etc., including among them shifting of shadows of retinal arteries and veins, the reflections from the blood-corpuscles of the capillaries of the retina, or phosphores, muscæ volitantes, to the extension of the retinal pigment, iris-pigmentation, alteration of contraction and dilatation of the pupil under stimuli, the natural pigmentation of the skin, the shading function of the eyelash, the action of winking, binocular vision breaking up the continuance of the stimulus of the retina, the

movements of the eye, head and body aiding, the shading influence of the eyebrows, all of which are evidence of the difficulties met and conquered by Nature in the evolution of the eye. He thinks that when this important law of retinal fatigue and recuperation is recognized almost all of our practical and esthetic laws will be revolutionized.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal (London), December 6.

- 1 *Acute Manifestations of Chronic Disease. J. Mitchell Bruce.
- 2 The Coroner and His Relations with the Medical Practitioner and Death Certification. William Wynn Westcott.
- 3 *On Colon Catarrh. T. Stacey Wilson.
- 4 Note on a Case of "True" Intestinal Sand. C. H. Bedford.
- 5 *Natural History and Pathology of Pneumonia. J. W. Washbourn.

The Lancet (London), November 29.

- 6 *Natural History and Pathology of Pneumonia. J. W. Washbourn.
- 7 *The Nature, Causes and Treatment of Cardiac Pain. Alexander Morrison.
- 8 Hysterectomy for Uterine Fibroid Disease in Early Pregnancy. Alban H. G. Doran.
- 9 A Case of Fulminating Appendicitis with General Septic Peritonitis; Operation; Recovery. J. Howell Evans.
- 10 The Low Phosphates and Urea in the Urine of the Tuberculous. A. W. Gilchrist.

Janus (Amsterdam), vii, October and November.

- 11 *Katjang Idjo, un nouveau médicament contre le béri-béri. D. J. Hulshoff-Pol.
- 12 Essai sur le développement du service de santé (health) militaire, spécialement en France et en Allemagne. O. Wanscher.
- 13 Die Biographie des Johannes Costerius von Rosenberg, Leib-Medicus des russischen Czaren Alexei Michailowitsch. Lachtin.

Presse Medicale (Paris), November 12 to 29.

- 14 (No. 91.) Histoire de la médecine. Déjerine.
- 15 (No. 92.) Traitement des pseudarthroses par l'agrafage métallique. C. Dujarier.
- 16 La dermatologie française. Gaucher.
- 17 (No. 93.) Ibid. L. Jacquet.
- 18 Contribution à l'étude bactériologique des cystites. H. Hartmann and H. Roger.
- 19 *Les injections intrathoraciques de mercure dans le traitement de la syphilis. P. Carnot.
- 20 (No. 94.) Pseudo-étranglement (strangulation) interne d'origine névropathique. Deboue.
- 21 Technique de la suture des muscles releveurs de l'anus (levator ani) au cours de la perineorrhaphie. P. Duval and R. Proust.
- 22 La "cryogénine" dans la fièvre des tuberculeux. F. Dumarest.
- 23 (No. 95.) La nouvelle Académie de Médecine. E. de Lavaranne.
- 24 Le travail (work) des glandes digestives. M. Labbé.
- 25 (No. 96.) L'appareil respiratoire et l'infection. A. Gouget.
- 26 La médication balsamique par le "Libanol" ou huile de cèdre. Huertas.
- 27 Traitement des suppurations tuberculeuses par les lavages au permanganate. Bayeux.

Giornale della Accad. di Med. (Turin), lxx, 8-9.

- 28 Osservazioni di fina anatomia nel campo del sistema nervoso periferico. R. Fusari.
- 29 *Eliminazione ed assorbimento del calcio e del magnesio negli epilettici. E. Audenino and A. Bonelli.
- 30 Considerazione sulla natura del siero del sangue (blood serum). E. Buffa.
- 31 Contributo allo studio dei tumori dell'intestino. S. Pusateri.
- 32 Contributo alla conoscenza dell'rene (kidney) cistico. U. Parodi.
- 33 Sulla eliminazione dei farmaci pel respiro in rapporto colla loro osmotossicità. A. Pansleri.

Riforma Medica (Rome), xviii, 134 to 190.

- 34 (Nos. 134-135.) Affinity between Myxedema and Soft Cutaneous Fibromata. F. Calderoni.—Stati mixedematosi e fibromi molli cutanei (Affinità morfologica e patogenetica).
- 35 Trasmissibilità all'uomo della tubercolosi bovina. Revencel.
- 36 (Nos. 136-140.) *Intorno a talune questioni di fisico-chimica applicata alle ricerche cliniche. A. Ceconi.
- 37 (No. 141.) *Gargling the Posterior Urethra. R. Binaghi.—Sul gargarismo dell'uretra posteriore.
- 38 (Nos. 142-145.) Condilomi piani (flat) ditferoidi. F. Saraceni.
- 39 (Nos. 146-148.) Per la cura (treatment) della cisti da echinococco del fegato (liver); 2 casi trattati con la sutura immediata senza drenaggio. Guarigione.
- 40 (No. 151.) Sulla malaria. Guido Baccelli.
- 41 (Nos. 152-155.) La cosiddetta (so-called) linfangioite venerea dell'asta (penis). L. de Sanctis.
- 42 (Nos. 156-158.) *Treatment of Cardiac Subjects at Watling Place. G. Licata.—La cura dei cardiaci alle stazioni termali.
- 43 (No. 159.) *Alcune proprietà di morfologia e di etiologia a proposito di un fibroma perianale. R. Campana.
- 44 (No. 160.) *Influenza delle acque minerali sulla eliminazione della bile. P. Casclani.

- 45 (No. 161.) A Few Rare Facts in Examination of Malarial Blood. G. B. M. Bianchi.—Di alcuni fatti poco frequenti rilevabili all'esame del sangue dei malarici.
- 46 (Nos. 162-164.) Coree, polliconie, tic e malattia del tic. C. Mannini.
- 47 (Nos. 165-166.) Sulle stomosine; iv comunicazione. La vaccinazione in vitro. E. Centanni.
- 48 (No. 167.) *Le iniezioni endovenose di ossigeno nell'uomo. F. Mariani.
- 49 (Nos. 168-170.) *Ricerche sperimentali sulle iniezioni interstiziali di vasellina, di paraffina e di agar. D. Taddel.
- 50 *La sensibilità dello stomaco dal punto di vista semeliotico. R. Supino.
- 51 (Nos. 173-7.) *Contributo alla meccanica del tremore. G. Boeri.
- 52 (Nos. 178-180.) Il corpusculo sanguigno e la fibra collogena, studiati nelle loro proprietà bio-chimiche in rapporto ad alcune dermosifilopatie (urticaria, etc.) E. Chirico.
- 53 (No. 181.) *Sulla vaccinazione antipestosa (against the plague) per via gastrica. M. Vincenzo.
- 54 (Nos. 182-3.) *Osservazioni istologiche sui granulomi infettivi. T. Secchi.
- 55 (No. 187.) Una paracentesi del pericardio. A. Tozzi.
- 56 (Nos. 188-9.) *Malattia di Hirschprung e megacolon idiopatico. G. Tarozzi.

Rivista di Patologia nerv. e ment. (Florence), vii, 10.

- 57 Caso di sclerosi laterale amiotrofica ad inizio bulbare. F. Franceschi.

1. **Acute Manifestations of Chronic Disease.**—Bruce calls attention to the fact that what we commonly call acute disease is in many instances nothing else than an acute exacerbation of a chronic condition. He insists on the importance of recognizing the primary cause and the utility of the acute attacks sometimes in revealing it. We may forget the chronic element or be blinded to it by the circumstances attendant on acute illness, especially if the latter take the forms of substantive disease, so-called. Pleurisy is a disorder which he considers the one of all others most likely to lead us astray in this respect. Its association with chronic abdominal disease, as well as with thoracic troubles, must be kept in mind. Immediate prognosis like the immediate treatment of acute illness can not be expected to be successful if the chronic underlying condition is not recognized. What we should do in most of these cases is not to try to simply prevent recurrence of similar attacks, but to bring about and arrest the primary disease in its course while it is still of comparatively slight degree and in safe location.

3. **Colon Catarrh.**—The primary symptoms of this condition are considered by Wilson to be first, excessive mucous secretion; second, excessive irritability of the muscular coats, causing them to harden and become palpable; third, constipation, due probably both to altered secretion and altered motility; fourth, pain, often colicky, and tenderness; fifth, nervous phenomena, especially mental depression and sometimes true neurasthenia. It is the symptoms of acute, subacute and chronic catarrh that he wishes specially to call attention to, and he gives the details in regard to them which we can not reproduce here. He notes as regards the question of the diagnosis of typhlitis from appendicitis, which is rather a large question, that the condition of localized tenderness after the acute symptoms have passed off, is more in favor of appendicitis. If the cases are recognized early enough and are properly treated by diet and medicine the prognosis as to recovery is satisfactory. In some chronic cases the best one can do is to keep the symptoms in check. Some cases seem inveterate. We must remember the rheumatic element of colitis. Salicylates are mentioned. We must regard the irritability of the colon, especially in the matter of diet and avoid any vegetables containing much woody fiber, seeds, skins, etc., as well as all indigestible solids. The nervous symptoms must be treated by attention to hygiene, climate and social treatment as well as medicine.

5 and 6. **Pneumonia.**—The third lecture by Washbourn deals with the bactericidal action of the various sera, the method of recognizing the pneumococci in the lesions, their existence under other circumstances in health, their localization in disease, and the anatomy of the lung.

7. **Cardiac Pain.**—The diagnosis of angina pectoris is taken up by Morison in his fourth lecture. It includes not only the determination of the varieties of that disease from one another, but of the syndrome of angina from other conditions which resemble it, but affect other structures. We must keep three

different points in mind: 1. The situation of the pain; 2, character of consequences of the pain; 3, the fact whether respiration is affected by the pain. In true angina involving only the heart, respiration is really unaffected. The degree of pain can not be taken as a measure of its seriousness. Some of the false anginas seem to cause more suffering than the more serious ones. The criteria of the danger of the case are not obtained except by a comprehensive view of the whole circumstances. Sex is an important factor, however, and the dangerous forms are invariably more common in man than woman. Age is also a factor, and if we exclude the consequences of syphilis and general debauchery it is rare. After 60 or 70 years, to pronounce a man absolutely sound and prescribe violent exercise would be imprudent, but given a comparatively young subject with normal radial arteries free from heart affection and without a history of syphilis, one can generally be justified in looking after the transient cause of the pain and in expecting disappearance of the effects. In a person over 50, on the other hand, anginal symptoms suggest the serious form. The value of x-rays in the diagnosis is mentioned at length and the prognosis of the true form is generally bad. Only care as to the habits, diet, etc., will in any measure protect one who has survived one attack. With angina *sine dolore*, being generally due to muscle failure, the prognosis is gravest, and the cardiac muscle is nearer the termination of its vital possibilities. He mentions as regards treatment the necessity of anyone wishing to reach 70 years being careful in his diet and habits after the age of 50. The Nauheim baths are mentioned as possibly safe in some cases, but they are out of consideration in anything but the mildest ones. The nitrites seem to be the principal drugs in the treatment of the paroxysms and for producing and keeping an equable blood pressure certain drugs must be used. He speaks against the use of tobacco in this condition, but believes in the use of mild mercurials as aiding in keeping up the proper condition of the circulation.

11. **Katjang Idjo, a Remedy for Beri-Beri.**—This communication from the insane asylum of Buitenzorg, Java, states that the berry or pea of the *Phaseolus radiatus*, a common plant, has proved effectual in the treatment of beri-beri. It was thoroughly tested on the 250 to 300 inmates of the asylum, and displayed a marked prophylactic action when an average of 150 gm. of the peas were eaten regularly every day. No injurious effects of any kind were noted even after prolonged use. It also proved a good remedy against the infection itself, but had no influence on the sequelæ. The edema rapidly subsided under its influence and likewise the paresis in the acute cases, which is liable to persist for months. Its influence was particularly beneficial in the severer forms of the disease. The asylum has long been infested with beri-beri, but not a single case has occurred in the pavilion in which the inmates take regularly 150 gm. of the peas in their daily ration. The natives make great use of these peas both in their own food and for poultry. Burg states that the plant was recommended as a remedy for beri-beri in the seventeenth century.

19. **Intratracheal Injections of Mercury in Syphilis.**—Carnot suggests that great benefit might be derived from inhalation of mercurial preparations in a closed chamber. This would ensure absorption both by the respiratory apparatus and the skin. The mucosa of the respiratory passages is remarkably tolerant of mercury, and the absorption in the trachea is so rapid that 2 liters of fluid can be injected into the trachea of a horse in the course of an hour without inconvenience, and 40 c.c. per kilogram an hour in a rabbit, which is equivalent to 2.5 liters for a man. The rapidity of absorption by intratracheal injection is comparable to that from intravenous injection, but has none of its disadvantages. Levi of Pisa has demonstrated that substances can be injected into the trachea, without any reaction, which are caustic for the digestive tract. Botey found that the injection of .5 c.c. of a 5 per cent. solution of nitrate of silver was tolerated by the trachea far better than by the stomach. Injection into the trachea of a 1 per cent. solution of sublimate or of .4 per cent. solution of gray oil was well tolerated in Carnot's experience and never caused prolonged coughing, râles, dyspnea, and nor any unusual cardiac

action. If a little was swallowed the subjects complained of prolonged pain in the stomach, while the same solutions in the trachea caused at most a slight tickling or sometimes a little hoarseness. He has found a 1 per 1000 solution of sublimate the most convenient for the purpose, injecting daily about 5 to 10 c.c. The results were extremely favorable in the 30 cases thus treated. The impression was derived that the action of the mercury was more prompt by this than by other methods of administration. In case the technic is defective and the fluid is swallowed, no harm is done. The procedure is very simple and does not betray the nature of the affection under treatment.

29. **Calcium in Epilepsy.**—Audenino published last year the result of researches which demonstrated that the proportion of earthy phosphates eliminated was much below normal in the cases of moral insanity examined. The present communication describes similar researches on 19 epileptics, and an almost constant subnormal proportion of the earthy phosphates was similarly demonstrated in 88 out of 91 examinations of urine and feces. This defective elimination did not parallel the general diminution of the chemical processes observed in epileptics. Nine of the subjects were given calcium in various forms, and in 7 there was slight increase of the earthy phosphates in the urine, and a large increase in the feces after administration of 2 to 8 gm. of calcium bromid or .5 to 2 gm. of the carbonate, lactophosphate or glycerophosphate, or lime water. These were all old, severe cases. In the other two patients the epilepsy was severe, but of more recent date. The calcium was eliminated principally through the urine and but little was found in the feces. A marked improvement followed the administration of the calcium, and one patient was dismissed as cured, there having been no seizures for four months. The particulars of the elimination and absorption are tabulated in typical cases.

30. **Laws of Chemical Physics Applied to Clinical Research.**—Ceconi demonstrates that the laws governing solutions in general, and especially electrolytic fluids, apply to the organic fluids, and to the serum in particular. He proclaims that they should be studied from this point of view as a means of clinical diagnosis. The serum behaves in regard to the osmotic pressure the same as a pure aqueous saline solution. The proteins in it have no osmotic pressure, or so little that it can be disregarded. As Bladgen's law does not apply to saline solutions, which obey the van t'Hoff-Arrhenius law, the study of the organic fluids should always include the application of the latter. The serum also contains both electrolytic and non-electrolytic substances, and obeys the laws regulating such fluids.

37. **"Gargling" the Posterior Urethra.**—Binaghi applies this term to the injection of a small amount of an antiseptic solution; the tip of the catheter in the posterior urethra and the fluid ejected with force, "à coups de piston," a little at a time, until all has been injected. By this means the posterior urethra is dilated and "gargled," and his experience with urethrostatis treated in this way has been exceptionally favorable. He uses a solution of boric acid and repeats the maneuver several times at a sitting, following it with an antiseptic lavage with a 1 per 1000 solution of silver nitrate, using extreme care to prevent pain or spasm. He describes seven cases in detail to illustrate the merits of this method.

42. **Health Resorts for Heart Disease.**—Licata asks why we can not send patients with heart disease to suitable watering places with the same confidence with which we send a tuberculous patient to a sanatorium. The treatment of heart disease is pre-eminently with hygiene, dietetics, thermal baths and kinsiotherapy, and yet very few watering places, he says, study to scientifically apply the measures most beneficial for heart disease.

43. **Nerves in Etiology of Neoplasms.**—Campana concludes from the research he describes that the nerves play an important part in the origin of neoplasms.

44. **Influence of Mineral Waters on Elimination of Bile.**—A patient with a biliary fistula ingested equal amounts of the popular thermal waters with an interval of rest between

each. The amount of bile eliminated, the specific gravity and the proportion of fixed substances was recorded for each period. There was very little increase of bile after ingestion of Carlsbad salts or water, but the amount rose from 100 to 142 c.c., when the waters of an Italian spring (Montecatini) were taken. This effect was constant in four repetitions with these waters, while under repeated tests with Carlsbad waters or salts the amount never rose above 107, and was even 85 on one day.

48. **Endovenous Injections of Oxygen in Man.**—Mariani's experiences were mentioned in THE JOURNAL of August 23, p. 460.

49. **Experimental Paraffin and Agar Prothesis.**—Paraffin, with a melting point at 41 and 50 C., and a 4 per cent. solution of agar were injected into rabbits to test their suitability for subcutaneous prothesis. The results were unfavorable in every instance.

50. **Sensibility of Stomach from the Semeiotic Point of View.**—Supino remarks that the trained hand is more reliable than any apparatus that has yet been devised for testing the sensibility of the stomach. He confirms the assumption that hyperchlorhydria is the rule in both alcoholism and chlorosis. He reviews and explains the findings in respect to the sensibility in various conditions.

51. **Mechanics of Tremor.**—Boeri shows that the oscillations of tremor obey the laws that govern the swinging of a pendulum. The contraction of the muscles takes the place of gravity. He calls attention to the constancy of the rhythm, and to the fact that the number of oscillations is never more than 10 or 12 to the second, or at the utmost 14. This limit of the oscillations is the same as for voluntary movements. He was never able to voluntarily reproduce a tremor with a more rapid rhythm than this.

53. **Antiplague Vaccination by the Mouth.**—Vincenzo administered by the mouth to fasting guinea-pigs .6 to .3 gm. of the active substance of Haffkine's antiplague vaccine in a single dose. The results indicated that a considerable degree of immunization was realized, but the animals that had received the larger doses died with symptoms of gastroenteritis. Later experiences with smaller, repeated doses of the vaccine by the mouth are proving still more encouraging.

54. **Actinomyces Granuloma.**—Secchi points out the resemblance between the mode of development of a granuloma caused by actinomyces and a tubercular or syphilitic gummatous formation. It resembles these lesions also in other respects, by the rapid necrosis, its mode of spreading, etc. The actinomyces has both a pyogenic and neoplastic action, but the former can not be called actual suppuration. The pyogenic virulence of the microbes is evidently of brief duration.

56. **Hirschsprung's Disease and Idiopathic Megacolon.**—Tarozzi describes an extreme case of the latter in a man of 50. The loop of the colon occupied nearly the entire front of the abdomen, the distance across measuring 30 cm., 10 for the ascending and 14 for the descending loop, with 6 for the interposed mesocolon. The intestine measured 40 cm. in circumference at the largest part. He presents arguments to establish that this idiopathic dilation is an acquired condition in adult life, while Hirschsprung's disease is a congenital affection in children.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department of the U. S. Army under orders from the Adjutant-General's Office, Washington, D. C., from Dec. 1 to 6, 1902:

Ames, Elvin W., captain, U. S. V., now serving in the Division of the Philippines, is honorably discharged by the Secretary of War from the service of the United States, his services being no longer required.

Beatty, Walter K., by direction of the Secretary of War, leave of absence for 25 days is granted.

Boyd, Robert, captain and asst.-surgeon, U. S. V., under instructions from the President, Paragraph 16, Special Orders, No. 276, Nov. 24, 1902, relative to Captain Boyd, is revoked by the Secretary of War.

Boyd, Robert, captain and asst.-surgeon, U. S. V., is honorably discharged by the Secretary of War from the service of the United States, to take effect Dec. 31, 1902, his services being no longer required. He will then proceed to his home.

Under instructions from the President, the following named officers, now at San Francisco, are honorably discharged by the Secretary of War from the service of the United States, to take effect Dec. 31, 1902, their services being no longer required: Major Joseph N. Henry, surgeon, U. S. V.; Major George B. Lawrason, surgeon, U. S. V.; Major Charles B. Nichols, surgeon, U. S. V.; Captain Fred F. Sprague, asst.-surgeon, U. S. V.; Captain Arthur D. Prentice, asst.-surgeon, U. S. V.; Captain Arthur Jordan, asst.-surgeon, U. S. V.; Captain Hyman M. Cohen, asst.-surgeon, U. S. V.; Captain Henry W. Eliot, asst.-surgeon, U. S. V.; Captain William W. Calhoun, asst.-surgeon, U. S. V.; Captain Reuben M. Bonar, asst.-surgeon, U. S. V.; Captain Percy L. Jones, asst.-surgeon, U. S. V.; Captain Fred W. Palmer, asst.-surgeon, U. S. V.; Captain Paul Mazzuri, asst.-surgeon, U. S. V.; Captain Thurston Smith, asst.-surgeon, U. S. V.

De Shon, George, major and surgeon, U. S. V., captain and asst.-surgeon, U. S. A., is honorably discharged by the Secretary of War from the service of the United States as major and surgeon, U. S. V., only, to take effect Feb. 1, 1903, his services being no longer required.

Enders, Robert M., captain and asst.-surgeon, U. S. V., as Captain Ames, above, to take effect Dec. 8, 1902.

Gibson, Edward T., captain and asst.-surgeon, U. S. V., as Captain Enders, above.

Strong, Richard P., first lieutenant, U. S. A., the resignation of his commission as an officer of the Army has been accepted by the President, to take effect Dec. 5, 1902.

Van Poole, Gideon McD., first lieutenant, and asst.-surgeon, U. S. A., is granted leave of absence, to take effect on or about Dec. 4, 1902.

Under instructions from the President, the following named officers are honorably discharged by the Secretary of War from the service of the United States, to take effect Feb. 1, 1903, their services being no longer required:

Major and Surgeons, U. S. V.—Arlington Pond, Henry D. Thomson, Robert H. Zauner, Walter Whitney, Thomas C. Chalmers, Seaton Norman, Shadworth O. Beasley, Frederick A. Washburn, Jr., George P. Peed, William D. Bell, Lawrence C. Carr, Abram L. Haines, Simon J. Fraser, Howard A. Grube, Robert Burns, Joseph C. Reifsnnyder, Lewis T. Griffith, Roger P. Ames, William D. Shelby.

Also Captains and Assistant Surgeons, U. S. V.—Clark I. Wertenbaker, James S. Kennedy, Guy G. Bailey, Edward F. Horr, Elmer S. Tenney, Samuel D. Huntington, James F. Presnell, Frederick H. Sparrenberger, Harold W. Cowper, Henry A. Littlefield (U. S. A.), Gerry S. Driver, Justus M. Wheate (U. S. A.), Ernest H. Wheeler, George R. Plummer, William R. Van Tuyl, William F. James, Frank W. Dudley, George S. Wallace, Timothy F. Goulding, Charles F. de Mey, Rene Vandam, Fred M. Barney, William G. Miller, Edwin C. Shattuck, Albert L. Miller (U. S. A.), Charles G. Elcher, Gilbert I. Cullen, Raymond E. Whelan, Cyrus D. Lloyd, William E. McPherson, Thomas H. Lander, Charles A. Cattermole, John S. Hill, Percival S. Rossiter, Frank DuBois, Samuel K. Carson, Najeeb M. Saleeby, Herman Schlageter, Alva S. Pinto, William R. Davis, Thomas C. Lougino, Charles W. Hack, Charles R. Gill, Francis J. Pursell, William T. Tanner, James G. McKay, William B. Summerall, Thomas K. Mulhaus, Frederick A. W. Conn, Luther P. Howell, Leonard K. Graves, Samuel T. Weirick, Michael E. Hughes, H. Brookman Wilkinson, Abraham D. Williams, John Gilbert, Robert E. Caldwell, George H. Calkins, W. Turner Wootton, Michael A. Rebert, Henry DuR. Phelan, Edwin M. Trook, William P. Baker, Luke B. Peck, Thomas R. Marshall, William C. LeCompte, Herbert Gunn, Waldemar A. Christensen, Edward A. Romig, Herbert M. McConathy, James B. Pascoe, Joseph L. Sanford, Thomas S. Lowe, William A. McVean, Francis J. Bailey, John P. Kelly.

Navy Changes.

Changes in the Medical Corps of the Navy, for the week ending December 13:

Medical Director F. M. Gunnell, retired, ordered to the Bureau of Medicine and Surgery.

P. A. Surgeon E. O. Huntington, detached from treatment at the Naval Hospital, New York, and ordered to duty at the Navy Yard, New York.

P. A. Surgeon W. H. Bucher, ordered to duty at the Naval Hospital, Norfolk, Va.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Dec. 4, 1902:

Surgeon G. W. Stoner, 7 days' leave of absence under Paragraph 179, of the regulations.

Surgeon H. R. Carter, detailed to represent the service at meeting of American Public Health Association at New Orleans, December 8-13.

Surgeon Eugene Wasdin, granted leave of absence for 21 days from December 15.

Surgeon G. M. Magruder, leave of absence for 12 days from November 17, 1902, granted by Bureau letter of Nov. 6, 1902, amended so that said leave shall be for 8 days.

Surgeon J. O. Cobb, on expiration of leave of absence, relieved from duty at Portland, Ore., and directed to proceed to Los Angeles, and assume command of the service at that port.

P. A. Surgeon C. P. Wertenbaker, detailed to represent the service at meeting of American Public Health Association at New Orleans, December 8-13.

P. A. Surgeon J. A. Nydegger, granted leave of absence for 6 days from December 8.

P. A. Surgeon H. W. Wickes, detailed as inspector of unserviceable property at Cleveland, Ohio.

P. A. Surgeon H. S. Mathewson, granted leave of absence for 7 days.

Asst.-Surgeon W. C. Billings, assigned to duty in the office of the U. S. Commissioner of Immigration at St. John, N. B.

Asst.-Surgeon C. W. Wille, to proceed to Baltimore, for temporary duty.

Asst.-Surgeon B. J. Lloyd, granted leave of absence for 3 days.

Asst.-Surgeon L. P. H. Bahrenburg, granted leave of absence for 7 days from November 25.

Asst.-Surgeon W. C. Rucker, Bureau order of Nov. 26, 1902, directing him to proceed to the Immigration Depot, New York, for temporary duty, revoked; and directed to proceed to Boston, and report to medical officer in command for duty and assignment to quarters.

Asst.-Surgeon W. K. Ward, relieved from duty at Boston, and directed to proceed to Reedy Island Quarantine and report to medical officer in command for duty and assignment to quarters.

A. A. Surgeon C. W. Bailey, granted leave of absence for 7 days from December 7, 1902.

A. A. Surgeon H. J. Hamilton, granted leave of absence for 2 days.

BOARDS CONVENED.

Board convened at Washington, D. C., Dec. 3, 1902, for the physical examination of an officer of the Revenue Cutter Service. Detail for the Board: Asst.-Surgeon J. F. Anderson, chairman; Asst.-Surgeon Edward Francis, recorder.

Board convened at Washington, D. C., Dec. 4, 1902, to revise the uniform regulations of the service. Detail for the Board: Assistant Surgeon-General G. T. Vaughan, chairman; Surgeon H. W. Sawtelle; Asst.-Surgeon B. S. Warren, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Dec. 12, 1902:

SMALLPOX—UNITED STATES.

California: Fresno, Nov. 1-30, 2 cases.
Colorado: Denver, Nov. 22-29, 1 case.
Florida: Jacksonville, Nov. 22-Dec. 6, 3 cases; Pensacola, Nov. 22-Dec. 6, 5 cases.
Georgia: Atlanta, Nov. 27-Dec. 3, 1 case.
Illinois: Chicago, Nov. 29-Dec. 6, 1 case; Evanston, Oct. 1-Nov. 30, 65 cases.
Indiana: Evansville, Nov. 29-Dec. 6, 1 case; Hammond, Nov. 23-30, 34 cases; Indianapolis, Nov. 29-Dec. 6, 8 cases, 1 death; Muncie, Nov. 1-30, 2 cases.
Iowa: Ottumwa, Nov. 1-22, 22 cases.
Kansas: Wichita, Nov. 15-29, 2 cases.
Maine: Biddeford, Nov. 29-Dec. 6, 11 cases.
Massachusetts: Nov. 29-Dec. 6, Boston, 23 cases, 7 deaths; Chicopee, 1 case; Everett, 2 cases; Lawrence, 1 case; Taunton, 1 case.
Michigan: Grand Rapids, Nov. 29-Dec. 6, 5 cases.
Missouri: St. Joseph, Nov. 29-Dec. 6, 1 case.
Nebraska: Omaha, Sept. 1-Dec. 6, 9 cases.
New Hampshire: Nashua, Nov. 29-Dec. 6, 21 cases.
New Jersey: Jersey City, Nov. 30-Dec. 7, 1 case.
New York: Nov. 29-Dec. 6, Binghamton, 1 case; Buffalo, 2 cases; New York, 1 case.
North Carolina: Charlotte, Nov. 1-30, 89 cases, 13 deaths.
Ohio: Cincinnati, Nov. 28-Dec. 5, 3 cases; Cleveland, Nov. 29-Dec. 6, 11 cases, 1 death; Toledo, Nov. 22-Dec. 6, 9 cases; Warren, Nov. 29-Dec. 6, 1 case; Zanesville, Nov. 1-30, 2 cases.
Pennsylvania: Nov. 29-Dec. 6, Altoona, 3 cases; Erie, 2 cases; McKeesport, 1 case, 1 death; Philadelphia, 6 cases, 1 death; Pittsburg, 36 cases, 6 deaths.
South Carolina: Charleston, Nov. 29-Dec. 6, 2 cases.
Tennessee: Chattanooga, Nov. 1-30, 1 death.
Texas: San Antonio, Nov. 1-30, 1 case.
Utah: Salt Lake City, Nov. 22-Dec. 6, 3 cases, imported.
Wisconsin: Green Bay, Nov. 30-Dec. 7, 1 case; Milwaukee, Nov. 29-Dec. 6, 4 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Nov. 8-22, 38 cases.
Belgium: Antwerp, Nov. 8-22, 4 cases, 1 death.
France: Marseilles, Oct. 1-31, 25 deaths; Paris, Nov. 15-22, 1 death; Rheims, Nov. 17-23, 1 case, 1 death.
Gibraltar: Nov. 2-16, 3 cases.
Greece: Athens, Nov. 15-22, 1 case.
Great Britain: Bradford, Nov. 1-15, 6 cases; Dundee, Nov. 15-22, 3 cases; Leeds, Nov. 15-22, 17 cases, 1 death; Liverpool, Nov. 15-22, 58 cases, 1 death; London, Nov. 8-22, 8 cases.
India: Bombay, Nov. 4-11, 4 cases, 4 deaths.
Italy: Palermo, Nov. 8-15, 3 cases.
Mexico: Nogales, Nov. 8-29, 15 cases.
Russia: Moscow, Nov. 1-8, 3 cases; Odessa, Nov. 8-15, 4 cases; Rifa, Sept. 1-30, 16 deaths; St. Petersburg, Nov. 1-15, 10 cases, 2 deaths; Warsaw, Oct. 25-Nov. 1, 2 deaths.

YELLOW FEVER.

Costa Rica: Port Limon, Nov. 22-29, 2 cases, 1 death.
Dutch West Indies: Buen Ayre, Nov. 15, 1 death on Dutch schooner trader.
Ecuador: Guayaquil, Nov. 15-22, 1 death.
Mexico: Tampico, Nov. 22-29, 23 deaths; Vera Cruz, Nov. 22-29, 14 cases, 2 deaths.

CHOLERA.

Dutch Indies: Java, Batavia, Oct. 4-25, 83 cases, 76 deaths.
India: Bombay, Oct. 29-Nov. 4, 1 death; Calcutta, Oct. 25-Nov. 8, 54 deaths.
Japan: Nagasaki, Nov. 1-10, 1 case.

PLAGUE—UNITED STATES.

California: San Francisco, Nov. 27, 1 case, 1 death.

PLAGUE—FOREIGN.

India: Bombay, Oct. 29-Nov. 11, 238 deaths; Calcutta, Oct. 25-Nov. 8, 18 deaths; Karachi, Oct. 26-Nov. 9, 31 cases, 24 deaths.
Japan: Yokohama, Nov. 1-8, 1 death.

GENERAL INDEX.

Use of the index will be facilitated by bearing in mind that subjects are frequently given under two or more headings, e. g., brain, cerebral, tumors, etc.; heart and cardiac; cirrhosis, liver and hepatic; child, children and infant; gland, thyroid, etc. Often, too, writers treat of the eye, ear, nose and throat under one head, etc., and the titles do not always permit of indexing under the several headings. The "General Index" contains only titles of articles, subjects of editorials, society proceedings, abstracts, and miscellaneous matter appearing in THE JOURNAL; the titles of editorials, book notices, deaths, societies, marriages, Association news, medical organization, and state boards of registration are indexed and arranged under their separate headings in the "Index of Departments," instead of in the body of the "General Index." The "General Index" contains the subjects of articles in other journals which have been abstracted in THE JOURNAL. The titles and authors of all other articles from other journals are under the "Current Medical Literature" Index.

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Abbreviations:

- A.—Association.
- S.—Society.
- M.—Medical.
- Acad.—Academy.
- Med.—Medicine.
- Phys.—Physicians.
- Surg.—Surgeons, Surgical.
- Coll.—College.
- Ry.—Railway.
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